

# Investigating young consumers' online buying behavior in COVID-19 pandemic: perspective of Bangladesh

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## Abstract

**Purpose** – The purpose of this study is to explore the changing buying behavior of young Bangladeshi consumers in this pandemic situation toward online orientation. The major determinants of the technology acceptance model (TAM) and consumer value theory are used to explore their impact on buying attitudes toward behavior.

**Design/methodology/approach** – In this study, a model has been conceptualized to examine the influence of hedonic and utilitarian motivational values along with perceived usefulness and perceived ease of use on actual buying behavior under pandemic conditions. A structured questionnaire has been prepared for an online survey, and data have been collected from 395 online shoppers. The structural equation modeling technique has been applied to analyze the data using SPSS and SmartPLS 3 software.

**Findings** – The results of this study support that perceived enjoyment and utilitarian attributes (price, convenience and health aspects) positively affect online buying attitudes along with perceived usefulness and perceived ease of use. Finally, online buying behavior is significantly influenced by the positive attitude of consumers.

**Research limitations/implications** – The findings of this study may contribute to developing marketing strategies that may attract buyers toward a new business orientation with prosperous supreme features in the future. The emergence of the COVID-19 pandemic has changed the existing behavioral patterns of consumers and opened a new opportunity for marketers.

**Practical implications** – Young consumers are a larger section, and deep knowledge about youngsters may direct marketers toward appropriate use of marketing tools and strategies in the future.

**Originality/value** – This study integrated the TAM with hedonic and utilitarian motivational predictors to measure their impact on consumers' online buying behavior.

**Keywords** Young consumer, Technology acceptance model, Consumer value theory, Online shopping behavior, Attitude, COVID-19 pandemic

**Paper type** Research paper

## 1. Introduction

COVID-19 has changed the existing behavioral pattern of consumers due to its high contagion characteristics. This crisis has highly affected the daily lives of people, businesses, foreign trade and movements. Consumers have shifted from the marketplace to the market space for shopping. Due to governments' restrictions and preventive measures, consumers

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have become interested in shopping online (Grashuis *et al.*, 2020), which ensures their safety. Radical shifting toward online shopping has opened a new opportunity for e-commerce businesses worldwide. This digital transformation ensures tremendous growth of the e-retail business (Dannenberg *et al.*, 2020), and Bangladesh is no exception. Bangladesh is characterized as one of the fastest-growing economies of South Asia. In Bangladesh, the e-commerce landscape started its journey in the late 1990s, but initially, most people were reluctant to shop through online platforms (Hossin *et al.*, 2018) due to the crisis of infrastructure development, trust, absence of cyber law, security and privacy lacking (Islam, 2016). From the period 2000–2008, the e-commerce industry started to grow to overcome some major crises such as payment gateway issues, delivery system development, raising customer education and awareness issues. Development of Web infrastructure, better internet facility offered by the mobile operators, convenient logistics support and knowledge of the buyers about digital platforms opens new dimensions for online shopping business (Hossin *et al.*, 2018). In the COVID-19 pandemic situation, retail business owners have released an alternate option through e-trade. In terms of revenues, Bangladesh is positioned 46th in the global ranking, with sales of over US\$1.50bn, which increased by 70–80% compared to the earlier times (Statista, 2020). According to Bangladesh Bank (2020), the rapid upward trend of e-commerce transactions is shown as the amount increased to US\$7.5bn in July 2020 from the amount of US\$5.78bn in June 2020. Digital wallet systems remove the challenges of e-payment, which have absolutely become a reality every single day; bring comfort through smart mobile services (Moudud-Ul-Huq and Hossain, 2020).

Young people who are educated and tech-savvy use their gadgets (social media and the internet) to collect information (Wang *et al.*, 2005) highly motivated by the social influencers that determine their online shopping behavior (Cores and Bertels, 2021). The younger generation of Bangladesh is playing a pioneer and vibrant role in the adoption of an online platform for buying (Tanvir, 2020). According to Sakil (2017), young people will realize the full potential of the digital revolution. YPulse (2020) notified Retail's New Reality identified that 82% of people between 13 and 39 years old have more engaged in online shopping during the pandemic, rather than they had before, and 65% of the buyers would like to engage in the online shopping platform. In this study, researchers intended to explain the online buying attitude and behavior of youngsters using the technology acceptance model (TAM) and consumer value theory. The researchers have extended the TAM theory incorporating utilitarian and hedonic values to predict the behavior of consumers in the crisis period as the COVID-19 pandemic. Limited studies have been conducted to measure internet shopping behavior during the pandemic time (Neger and Uddin, 2020; Showrav *et al.*, 2021), but no literature has been found to focus on young consumers of Bangladesh during the pandemic. Young people adopt technology innovations very quickly and feel enjoyment in online shopping. Thus, the larger size of the young group section and their purchasing attitude have made them attractive to digital marketers. A deep understanding of the variables that affect the buying behavior of young consumers may direct marketers to apply appropriate marketing tools and strategies as the characteristics, beliefs and behavioral patterns of the young generation are different from other sections of society. Thus, the findings of this study will contribute to the literature by confirming the motivating factors that affect the buying behavior in any crisis or an emergency situation.

## 2. Literature review

During the pandemic, the pattern of buying behavior of young consumers has swapped dramatically (Mehta *et al.*, 2020). Explaining the influential factors on consumers' online buying attitude, established literature such as the "Theory of Reasoned Action" (TRA) (Fishbein and Ajzen, 1975) and "Technology Acceptance Model" (Davis, 1989) are the most popular theories. Davis adopted the TAM to define human acceptance behavior in the

information system. A review of the related research in this area explains that the TRA (Fishbein and Ajzen, 1975) and TAM (Davis, 1989) extensively help to predict human behavior in online buying environments (Pavlou, 2003; Wu and Liao, 2013). Many researchers have investigated the utilitarian and hedonic values integrating with the TAM in different contexts (Akdim *et al.*, 2022; Van der *et al.*, 2003; Davis, 1989). Thus, the theoretical structure of this study stands on the TAM and consumer value theory to analyze the online buying attitude and behavior.

### *2.1 Perceived usefulness and perceived ease of use*

Perceived usefulness (PU) is defined as “the degree to which a person believes that using a particular system would enhance his or her performance” (Davis, 1989). PU is the perception toward adopting a particular system to improve quality or efficiency. Bhattacharjee (2001) observed that consumers always accept a product when its usage is believed to be useful. Besides PU, e-marketers face strong challenges of understanding and awareness level of the consumers. Perceived ease of use (PEOU) refers to “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989). Shroff *et al.* (2011) identified that PEOU has a strong significant influence on attitude toward usage. Many researchers have argued that PU and PEOU can be used to achieve instrumental outcomes reflecting utilitarian aspects, whereas PE reflects the hedonic aspect that affects consumers’ attitude toward adopting new information systems (Davis, 1989; Ashraf *et al.*, 2014; Li, 2016). Based on the above discussion, the following hypotheses are related to utilitarian and hedonic values.

*H1.* PU has a significant impact on consumers’ online buying attitudes.

*H2.* PEOU has significantly affected consumers’ online buying attitudes.

### *2.2 Hedonic and utilitarian values*

Rapid technological advancements have an impact mostly on the young generation and their spending patterns. Avclar and Özsoy (2015) and Redda (2020) investigated the motives behind e-shopping and found that perceived utilitarian and hedonic benefits enhance the shopping experience and affect customers’ buying behavior accordingly. Utilitarian values focus on instrumental benefits, and hedonic values offer self-fulfilling benefits (Overby and Lee, 2006). Studies on university students, Delafrooz *et al.* (2009) and Al-Swidi *et al.* (2012) identified that utilitarian perception has a significant positive impact on online buying, whereas hedonic motivation has no significant influence on attitude toward behavior. Besides, another study on Indian consumers found that utilitarian motivations have a significant relationship with e-buying intentions, and hedonic motivations have partial significance on e-shopping intentions (Chakraborty and Soodan, 2019). But, the pandemic situation has changed the traditional buying decision process. A disruptive change in our daily activity patterns and lifestyle has resulted due to the COVID-19 pandemic (Nicola *et al.*, 2020). In a study, Koch *et al.* (2020) identified a positive influence of hedonic value factors on consumers’ e-shopping behavior, which justifies previous research findings (Shang *et al.*, 2005; Wen *et al.*, 2011). Hedonic shoppers are mostly motivated by shopping experiences and enjoyment. Therefore, perceived enjoyment (PE) is a strong influential factor that affects online buying behavior (Thong *et al.*, 2006). The following hypothesis is developed on the previous discussion:

*H3.* PE has a significant impact on consumers’ online buying attitudes.

Utilitarian values are the functional benefits that direct a consumer toward achieving a goal. In explaining online behavior, Khare and Rakesh (2011) have focused on the utilitarian

aspects that affect the decisions of young customers. Many researchers have characterized the factors of perceived benefits (PB) (convenience, cost-saving, product selection, information availability) as utilitarian values (Moon *et al.*, 2017; Chakraborty and Soodan, 2019; Redda, 2020), which directed consumers toward goal-achieving or problem-solving efforts. In the online platform, PB is the totality of e-shopping satisfaction and advantages that meet the desires and wants of consumers (Shwu-Ing, 2003). A study on the Indian consumers, Bhatt (2014) found that PB, PE and safety/privacy are the important factors that have an impact on consumer perceptions on online buying behavior. E-shopping is different from traditional buying methods because of its convenience value, anytime shopping, easy comparison in one platform and delivery system. This study has attempted to test three significant attributes of PB (convenience, wider selection and price) that drive consumers toward online shopping act as utilitarian motives. Online business provides 24 h shopping facilities without any time limit, and consumers can shop comfortably from home, which is convenient for them (Redda, 2019). A wider selection of products and prices are also rated as important motives to shop online (Delafrooz *et al.*, 2009; To *et al.*, 2007). Therefore, the empirical hypothesis states as:

- H4. Convenience (CV) has a significant influence on consumers' online buying attitudes.
- H5. Wider selection (WS) has a significant influence on consumers' online buying attitudes.
- H6. Price (P) has a significant influence on consumers' online buying attitudes.

### 2.3 Health aspects

In the COVID-19 pandemic, consumers' attitudes, behavior and purchasing patterns have been changed. People become conscious about their health protection and hygiene, assuming e-shopping reduces the infection risk due to less direct exposure with other people. Because of the governments' restrictions and maintaining social distance for self-protection, consumers have become reliant on e-shopping as they have no alternative (Bucsky, 2020; Khan and Bhuiyan, 2021). Zitek and Schlund (2021) have explored that the perceived impact of COVID-19 on daily life is related to greater health anxiety. Consumers are looking to minimize the risk of exposure and desire a safe and timely delivery system from marketers. A study by Coelho *et al.* (2020) found that consumers become conscious about safety issues and take utmost precautionary measures to save themselves from the contagious infection. In a study on Bangladeshi consumers, the health aspects were found to have a significant positive impact on online shopping behavior in the COVID-19 pandemic situation (Alam, 2020). Therefore, feelings of safety and security drive people toward online shopping. The impact of health issues on online buying attitudes is yet to be explored, so included in this study, and the hypothesis is devised as:

- H7. Health aspects (HA) have a significant impact on consumers' online buying attitudes.

### 2.4 Attitude (ATT)

Attitude toward usage refers to "the degree to which an individual evaluates and associates the target system with his or her job" (Davis *et al.*, 1989). Attitude regarding e-shopping is defined as the addition to customers' favorable or unfavorable feelings toward e-shopping experiences (Bianchi and Andrews, 2012). From motivation and perception, attitude forms and consumers make decisions. Attitude performs as a predictor of e-shopping behavior and makes a bridge between a consumer's background characteristics and their consumption pattern (Shim *et al.*, 2001). Attitude plays a vital positive association with intention to buy in e-commerce platforms (Shu and Chuang, 2011; Tsai *et al.*, 2011; Redda, 2019). Consumer

attitudes are difficult to change, but this COVID-19 pandemic situation forced people to change their traditional behavioral patterns.

H8. Attitude (ATT) has a significant influence on consumers' online buying behavior (OBB).

### 2.5 Online buying behavior (OBB)

Explaining the influential factors on consumer e-buying attitudes, established literature such as the TRA (Fishbein and Ajzen, 1975) and "Technology Acceptance Model" (Davis, 1989) are the most popular theories. The theoretical structure of this study stands on these two theories to analyze online buying behavior. A transition is visible where the young age group (18–29 years) creates more opportunities for customized products for responsiveness and communicative websites (Jadhav and Khanna, 2016). E-shopping behavior can be predicted from the buying process through the internet. Thus, this study attempts to contribute to the empirical judgment by limiting some influential factors that affect the youth in this pandemic situation.

## 3. Conceptual framework and hypothesis development

The purpose of this study is to examine the online buying attitude and behavior using the factors of the TAM and customer value theory. A conceptual framework has been designed to analyze the impact of PU and PEOU on online buying behavior extending hedonic (PE) and utilitarian values (convenience, wider selection and price) to measure the online buying attitude. In this current study, researchers also added the health aspects variable to measure its effect on buying behavior in the COVID-19 outbreak among young consumers.

The theoretical structure contains one dependent variable (i.e. online buying behavior), one mediating variable (i.e. attitude) and seven independent variables as PU, PEOU, PE, convenience, price, wider selection and health aspects.

## 4. Methodology

### 4.1 Data collection

The study is empirical and descriptive in nature. To collect primary data, an online survey method has been performed. The convenience sampling method was conducted to collect the respondents who are studying at the college and university levels. With the proliferation of the internet, college students have become an important part of the consumer section as they are heavy and active users compared with the other sections of the population (Jariah *et al.*, 2004; Delafrooz *et al.*, 2011). All the constructs used in this research model were applied with standard scales from previous literature. A pilot survey has been conducted on 35 post-graduation students who are experts in e-commerce and information systems. To produce the final structured questionnaire, the findings of the pilot test have been incorporated to increase the validity and accuracy of the measurement.

A well-structured questionnaire with a five-point Likert scale was prepared to collect the responses through an online survey. The response scales are coded as 5 = strongly agree and 1 = strongly disagree. The email addresses of the students were collected from the university database and requested to participate if they had already done online purchases. To overcome common method bias (CMB) and increase response accuracy, respondents were provided a detailed set of instructions and a cover sheet with proper research information (Hair *et al.*, 2015) on how the information will benefit to both the participants and the organization (Podsakoff *et al.*, 2012). Respondents were offered a small monetary incentive for their eager participation. This survey was conducted from March 25, 2020, to April 20, 2021, when partial and full lockdown were going on in Bangladesh.

This study was conducted on the graduate and post-graduate students who are studying at the Jagannath University Bangladesh. From the university website, it is found that a total of 19,088 students are currently studying at the university. Therefore, the estimated sample size was found to be 390 using the formula,  $n = N/(1 + Nd^2)$  of Islam (2007). Following the snowball sampling procedure, the questionnaire was sent to different students' groups through Google Forms and requested to share with their friends and classmates who have previous online purchasing experience. Initially, questionnaires had been sent to 425 respondents, and received 399 responses. After scrutiny, 395 data have been used for further analysis.

#### 4.2 Data analysis

The collected data were analyzed in SPSS 23.0 version for exploratory factor analysis and descriptive analysis. Besides this software, partial least squares structural equation modeling (PLS-SEM) was applied for SEM analysis. With SEM analysis, multivariate statistical analysis can be used to measure the structured relationship between the direct and latent observed variables (Stein *et al.*, 2012). The constructs of this study are unobserved and cannot be measured directly; hence, SEM analysis has been applied to represent, estimate and test the relationship among latent variables (Suhr, 2006). A variance-based SEM approach, named PLS, can be used to explore the edges of exploration studies when the sample size is small due to some restrictions, and collected data are not normally distributed (Vinzi *et al.*, 2010). In this single analysis, the measurement model (the relationship between measurements and constructs) and the path model (the relationship among the constructs) can be assessed simultaneously to test theoretical relationships (Trijp *et al.*, 1997). Therefore, in this study, researchers have applied the SEM method to measure the significance, and the statistical acceptability of the path model as the sample size is small.

### 5. Analysis and findings

#### 5.1 Demographic classification

The demographic profile of the respondents was categorized into different groups income, gender and level of education. Data were collected from the age ranged from 20–25 years who are studying at the graduation and post-graduation level. In most cases, young people make purchasing decisions on behalf of parents, and they play the role of reference group also. The frequency distribution (Table 1) shows that 51.90% of respondents are male, and 48.10% of respondents are female. Table 1 shows the demographic data of the respondents.

#### 5.2 Preferred payment method and types of products purchased by the youth group

This study explored that most of the respondents (76%) prefer cash on delivery as a payment mode. Only 10% of respondents do payments through mobile banking, and 14% prefer mobile financial services (Table 1). Respondents were asked to rate 5 for the most priority and 1 for the least priority product category they would have preferred to buy during the pandemic lockdown. And, the analysis revealed that consumers scored highest for the necessary food and grocery, then hygiene items, clothing and accessories, electronics and gadgets, personal care and cosmetics, and medicine and others (Table 1).

#### 5.3 Common method bias

To reduce the risk of CMB, researchers have used Harman's single-factor test to diagnose collinearity in the survey data. In SPSS, principal component analysis has been specified to assess the single factor without rotation to describe the variance (Harman, 1976). The results of the test revealed that a single construct explains 27.90% of the total variance (Table 2),



Aspects	Classifications	Frequency	%
Gender	Male	205	51.90
	Female	190	48.10
Income	< 10,000	51	12.91
	10,000–20,000	213	53.93
	20,000–30,000	101	25.56
	> 30,000	30	7.60
Level of education	Graduate	256	64.81
	Post-graduate	139	35.19
Payment method	Cash on delivery	301	76.20
	Mobile banking	39	9.87
	Mobile financial service	55	13.92
Product's category	<i>Categories</i>	<i>Score</i>	<i>Position</i>
	Clothing and accessories	452	3rd
	Electronics and gadgets	387	4th
	Necessary food and grocery	467	1st
	Hygiene items	454	2nd
	Personal care and cosmetics	365	5th
	Medicine and others	347	6th

**Table 1.**  
Demographic profile and purchasing behavior of the respondents

Source: Primary data analysis,  $N = 395$

**Table 2.**  
Eigenvalues and variance explained for the initial exploratory model including nine factors (principal component analysis)

Factor No	Initial eigenvalues			Total variance explained		
	Eigenvalue	Variance explained	Cumulative Variance explained	Extraction sums of square loadings		
				Eigenvalue	Variance explained	Cumulative Variance explained
1	7.439	30.178%	30.178%	6.398	27.898%	27.898%
2	3.897	15.567%	45.745%			
3	2.859	8.449%	54.194%			
4	2.607	7.304%	61.498%			
5	2.399	5.358%	66.856%			
6	2.203	3.468%	70.324%			
7	2.106	2.628%	72.952%			
8	1.728	2.072%	75.024%			
9	1.506	1.745%	76.769%			

which is less than 50% recommended by Podsakoff *et al.* (2012). Further, to test CMB, the variance inflation factor (VIF) values for the variables are ranged from 2.17 to 1.02, which are less than the threshold level of 3.3 (Kock, 2015) shown in the Table 3. Therefore, multicollinearity does not exist among the variables in this study.

#### 5.4 Factors influence online buying behavior

5.4.1 Reliability and validity. According to Bell *et al.* (2018), reliability is the possibility of repeating the results of a study explains that when the results of a study are repeated the same measures, the study is considered reliable. With the use of PLS-SEM analysis, composite reliability measures item reliability, a better indicator to calculate internal consistency than Cronbach's alpha (Yin *et al.*, 2010). In Table 3, the composite reliability of the constructs has been given, and the scores ranged from 0.743 to 0.842, exceeding the recommended threshold of 0.7 (Hair *et al.*, 2010), and thus accepting the reliability of the measurements.

Constructs	Items	C.R	AVE	VIF	Standardized factor loading
PU (Koch <i>et al.</i> , 2020; Devaraj <i>et al.</i> , 2002)	A useful way to shop	0.842	0.64	1.12	0.839***
	Makes shopping easier				0.808***
	Allows shopping more efficiently from any place				0.751***
PEOU (Venkatesh <i>et al.</i> , 2012)	Easy to become skillful	0.799	0.666	1.09	0.886***
	The webpage is informative and easily understandable				0.741***
PE (Koch <i>et al.</i> , 2020; Wen <i>et al.</i> , 2011)	During the pandemic, I enjoy online shopping	0.811	0.599	1.33	0.836***
	I am satisfied with online purchasing				0.748***
	Buying online is entertaining				0.715***
CV (Jadhav and Khanna, 2016; Delafrooz <i>et al.</i> , 2009)	The convenience of shopping from home	0.85	0.741	2.06	0.806***
	24/7 easy access				0.912***
WS (Jadhav and Khanna, 2016; Delafrooz <i>et al.</i> , 2009)	A broader selection of products and brands	0.85	0.739	1.04	0.879***
	Products are available within a short time				0.839***
P (Jadhav and Khanna, 2016; Delafrooz <i>et al.</i> , 2009)	Competitive prices	0.743	0.649	1.10	0.921***
	Discounts and rewards are motivating				0.883***
HA (Alam, 2020)	Shopping from home ensures less exposure	0.818	0.694	1.23	0.906***
	Ensures social distancing				0.753***
ATT (Sinha and Kim, 2012)	Online shopping is time-saving	0.763	0.619	1.44	0.856***
	Online shopping saves search costs				0.711***
OBB (Koch <i>et al.</i> , 2020; Li, 2016)	I frequently shop online	0.812	0.619	1.46	0.953***
	I recommend others for online shopping				0.686***

**Note(s):** \*\*\* indicates *t*-test has attained the significance level ( $p < 0.001$  level)

**Table 3.**  
Analysis of measurement model

Validity explains the indicators that are defined to measure a concept, to explain and measure that concept. To measure the convergent validity, all the items need to be examined by their factor loadings on their constructs, and the next step is to test whether the average variance extracted (AVE) values of all constructs have loadings above the recommended cut-off value of 0.55 (Wilkins and Hillers, 1994) and 0.5 (Hair *et al.*, 2010), revealed in Table 3.

The discriminant validity test is another test to measure validity where both the items and the constructs are examined. In this study, discriminant validity is done on the construct level and found small inter-item correlations. Table 4 reflects the square root of the AVEs in the diagonal units for each construct are greater than the cross loadings with other constructs (Willer and Yussefi, 2007). Therefore, the discriminant validity of this study is also supported.

*5.4.2 Path analysis with partial least squares structural equation modeling.* To explore the standardized path coefficient, the authors have applied the PLS-SEM method. The standardized path coefficient values of the sub-constructs and path coefficients of the constructs are presented in Table 5. In bootstrapping, 500 resamples were used to assess statistical significance. To measure the significance of the path coefficients, bootstrap *t*-values have been assessed, which are supposed to be greater than 2.0 (Yang and Peterson, 2004). PLS not only explains the overall goodness-of-fit index but also explains its validity by



**Table 4.**  
The discriminant validity

	ATT	P	WS	CV	OBB	PU	PE	PEOU	HA
ATT	<i>0.768</i>								
P	0.594	<i>0.67</i>							
WS	0.532	0.544	<i>0.859</i>						
CV	0.535	0.413	0.476	<i>0.861</i>					
OBB	0.585	0.456	0.435	0.38	<i>0.83</i>				
PU	0.659	0.631	0.683	0.533	0.578	<i>0.8</i>			
PE	0.19	0.234	0.29	0.191	0.254	0.414	<i>0.787</i>		
PEOU	0.634	0.591	0.584	0.43	0.514	0.647	0.344	<i>0.816</i>	
HA	0.273	0.124	0.153	0.291	0.243	0.215	0.235	0.081	<i>0.833</i>

**Note(s):** The italic statistics of the diagonal cells are the square roots of AVE. Off-diagonal elements are correlations among determinants

**Table 5.**  
Path examination of research model

Between facets	Path coefficients ( $\beta$ )	t-value	p-values	Hypothesis	Decision
PU → ATT	0.313	2.751	0.006***	H1	Supported
PEOU → ATT	0.290	3.892	0.00***	H2	Supported
PE → ATT	0.144	2.071	0.039**	H3	Supported
CV → ATT	0.157	2.067	0.039**	H4	Supported
WS → ATT	0.001	0.017	0.987	H5	Not supported
P → ATT	0.177	2.258	0.024**	H6	Supported
HA → ATT	0.152	2.745	0.006***	H7	Supported
ATT → OBB	0.585	8.656	0.00***	H8	Supported

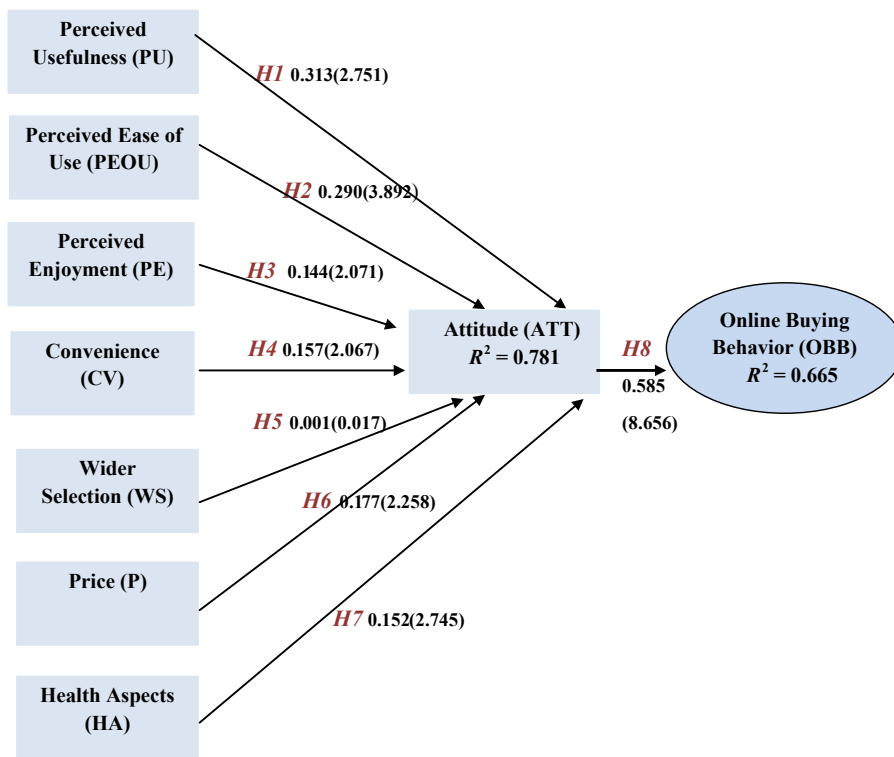
**Note(s):** \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ (one-tailed test)

investigating  $R^2$  and the structural path with the regression model (Chin, 1998). The outcomes of the analysis explain the support evidence for the hypothesis of the model, which is shown in Figure 1. The analysis shows that attitude has a significantly positive influence on the online buying behavior of young consumers, with a significance level at the  $p < 0.05$  level. About 78% of the variance explained the attitude where  $R^2 = 0.781$  is derived from PU, PEOU, convenience, variety, price, health aspects and PE.

The standardized path coefficient accounted for 0.585 for the dependent variable attitude toward online buying behavior where  $R^2$  is accounted for 66.5% in the model, greater than the recommended standard significance level at 0.20 (Yang and Peterson, 2004). Thus, the fitness of the overall model is good.

**5.4.3 Hypothesis testing.** With effect size ( $f^2$ ), the strength of influence of a specific independent variable on the dependent variable (Yang and Peterson, 2004) has also been computed. The threshold cut-off value was  $f^2 = 0.35$  for large effect sizes;  $f^2 = 0.15$  for medium effects and  $f^2 = 0.02$  for the small effect (Yun et al., 2016). From the analysis,  $F$ -statistics explain  $F = 61.20$  at 5% significance level showed a great effect of the attitude on the e-buying behavior. The sub-constructs of attitude; PU, PEOU, convenience, wider selection, price, health aspects and PE had a significant and positive influence on the online buying behavior of consumers. Among them, the PU has the highest (0.313) influence following PEOU (0.290) on attitude, which consequently affects (0.585) e-buying behavior.

The ultimate decision of the projected hypothesis is shown in Table 5. The values of the  $t$ -statistics of the path of H1 (2.75), H2 (3.89), H3 (2.07), H4 (2.07), H6 (2.26), H7 (2.75) and H8 (8.65) were greater than the standard value. Thus, the findings of the study support the hypothesis that PU, PEOU, PE, CV, P and HA have a positive influence on attitude and



**Figure 1.** Standardized total effect of the proposed theoretical framework

attitude has a positive and significant influence on e-buying behavior. Besides, the  $t$ -value of the path of  $H5 = 0.02$  is less than the standard value; thus, WS has no influence on attitude.

## 6. Discussion

For this research purpose, data have been collected from 395 respondents, and both male and female students have experience of online buying. The majority of the respondents comprise middle-income groups as they have just completed graduation and are students in the profession. Among the different product categories, necessary food and grocery items were found as the most demanded item supporting the findings of [Vijay and Nivetha \(2020\)](#) that 50% of respondents spend money on essential goods.

The results show that PU and PEOU, the two major determinants of the TAM, predict consumers' attitudes toward purchasing behavior. Consumers find the functions and activities of online buying very straightforward and easy, which derives a positive attitude toward this platform. The findings of the study indicate that during COVID-19, both the utilitarian and hedonic motivational values have a positive significant influence on attitude and online buying behavior, which justifies the previous research ([Sahney et al., 2008](#); [Liu and Forsythe, 2010](#)). It appears that consumers are becoming interested in online shopping for utilitarian and hedonic benefits, as it offers useful and enjoyable shopping from home. In the online platform, people search for different attributes or benefits that drive them toward buying decisions. Convenience, price and wider selection are the important attributes of

perceived utilitarian benefits that have been analyzed in this study and found that price and convenience have significant influence, but the wider selection has no influence on online buying behavior, which is different from the findings of Redda (2020) and Delafrooz *et al.* (2009). These findings suggest that young consumers are very price-sensitive, and anytime shopping from any place encourages them to online buying. Therefore, convenience and price are perceived to have greater benefits than wider selection. Besides these factors, the health aspects are also having a significant influence on online buying attitudes indicating that perceived risk of contamination affects the psychological and emotional attitude of online buyers. Finally, the attitude of online buyers was found to be a major predictor of online shopping behavior. Furthermore, the findings support that the utilitarian motives predominate more than hedonic motives in the context of young Bangladeshi consumers during the COVID-19 crisis.

### 7. Theoretical and managerial implications

The findings of the study extend the theoretical understanding through clarifying the determinants of buying behavior of young consumers who will be potential consumers in online business. The fast spread of the internet removes geographical barriers, opening a global place of business. The impact of the antecedents on e-buying behavior may vary according to country-wise, customer segmentation-wise and product category-wise.

The results of this research support that consumers' buying behavior is positively affected by the utilitarian, hedonic and perceived benefit factors in the pandemic situation. The significant finding of this study is that consumers become conscious of health and safety issues at the time of buying, which also drives them toward online shopping. COVID-19 is a novel crisis and is changing the pattern of human life. In a study, Mehta *et al.* (2020) argued that the COVID-19 pandemic has had an obvious impact on the world economy, shifting socio-economic changes that change consumers' buying behavior. Thus, the e-marketers should focus on the health and safety measures at the delivery time, and customers need to be assured about this factor. The long-lasting COVID-19 crisis, habitual buying behavior and competitive advantages of e-shopping might change the traditional buying patterns of consumers. Before investing time and effort, managers must study consumers' buying behaviors, the impact of the determinants on changing behavioral patterns, which may enhance their knowledge and understanding. Therefore, the findings of this study may guide marketers to visualize not only younger but also other segments of customers. E-retailers may adopt effective marketing strategies to enjoy competitive advantages over traditional business practices. Marketers are facing challenges through digital marketing communication channels as consumers' behavior has drastically changed due to lockdown and pandemic situations (Akter and Sultana, 2020).

### 8. Conclusions

A survey on US consumer behavior before and after the COVID-19 pandemic identified that this crisis has had an effect on purchasing behavior as people significantly increase their buying online (Mason *et al.*, 2020). This study is very contemporary in understanding the influence of attitudinal determinants on predicting buying behavior. Youth are the core of a nation's future and will play a significant role as stakeholders in prospective online business. PU and PEOU are the two important predictors of the TAM that have been studied in this study to explore their impact on attitude. The determinants and sub-determinants of the conceptual model have supported the reliability and validity of the measures. The coefficient of variance explains the goodness-of-fit of the model. Special focus on young people revealed that both the utilitarian (PU and PEOU) and hedonic motives (PE) have a positive significant influence on their attitude toward e-buying decisions. An explanation suggests that students

tend to focus more on utilitarian and hedonic benefits along with PB factors. Varieties of products react differently from convenience and price factors on online buying behavior, which may happen due to crises and novel situations. Consumers are more likely risk-averse in nature. With e-shopping, they try to minimize the exposure risk. Thus, this study explores that safe and quick delivery concerns are significantly affecting buyers' attitudes and buying behavior on the internet. A noticeable change in behavior is visible in this COVID-19 pandemic where survival becomes the prime necessity. Fear of crisis and little reliance on online shopping direct people toward impulse buying behavior. Finally, this study contributes to the understanding that attitude has a great influence on e-buying behavior, which is indifferent from the findings that attitude is the direct indicator for making any purchase decision (Haque *et al.*, 2006).

This study also suffers from some limitations. First of all, this study focused on young consumers who belong to a small and emerging segment of society, which limits the generalization of the study. Then, random sampling data instead of a convenience sampling method can provide different results explaining consumer buying behavior. Thirdly, data have been collected in a crisis situation from Bangladesh, which may be different in normal timeframes and other country contexts. This study focuses only on the TAM and its impact on buying behavior. Further study may explore different findings incorporating the Theory of Acceptance and Use of Technology (UTAUT2) to reveal the study relationships.

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