UNDERSTANDING THE DETERMINANTS OF YOUNG INDIANS' SHOPPING INTENTION DURING COVID-19

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ABSTRACT

Retail e-commerce sales in India are expected to reach $45.17 billion by 2021, and this increase in sales positively correlates with the use of mobile Internet in the country. But due to COVID-19 related measures and restrictions imposed by the authorities and the uncertainties in the market have influenced the e-commerce business. Therefore, online retailers are required to adapt the recent changes in consumer behaviour to survive in the volatile market. An extended Technology Acceptance Model (TAM) is adopted for this study. This study analyzed 316 responses gathered from the postgraduate management students from India. Partial Least Squares (PLS-SEM) analysis method is adopted for model verification and analysis. The analysis of the results provides strong support for the proposed research model. Notably, the significant positive relationship between shopping attitude, shopping values and shopping intentions provide a useful insight into the Indian consumers' online shopping behaviour during COVID-19. The study provides a direction for further research in e-commerce marketing in future pandemic like situation.

Keywords: COVID-19, Shopping Values, Shopping Intention, Shopping Attitude, Technology Acceptance Model (TAM), PLS-SEM Techniques.

INTRODUCTION

India is at the cusp of a digital revolution. The Internet has become an integral part of the growing urban Indian population. India is more than 1.3 billion people country with a mobile penetration of almost 80%. Today, the e-commerce industry is one of the fastest-growing sectors in India. E-commerce platforms are providing many advantages to the customers, such as: (1) it helps to compare one product with the competitive products based on price, colour, size and quality, (2) e-commerce shopping is available for customers around the clock compared to a traditional store, (3) it trims down the cost of product and service delivery and brings buyers and sellers together. In-spite of customers rarely have a chance to touch and feel product and service online before they make a decision; e-commerce sellers usually provide more product information that customers use during a purchase decision.

On the other hand, the novel coronavirus disease (COVID-19) pandemic has induced social and psychological disorder among peoples (Pera, 2020). Peoples are in different mindsets towards shopping except for daily needs (Mayer, 2020). The E-commerce market also witnessed the inevitable chaos and compulsive calm due to the prevailing novel coronavirus disease (COVID) lockdown restriction, particularly in India (Sanjanwala & Issac, 2020). The Ministry of Home Affairs (*"MHA"*) had issued guidelines to limit the activities in the e-commerce sector during Lockdown 1.0 and Lockdown 2.0. These restrictions have been eased later phases of lockdown. The MHA guidelines issued on March 24, 2020 (further modified on March 25, 2020, March 26, 2020, and April 02, 2020) permitted delivery of essential goods such as food, groceries including hygiene products (*as clarified on March 29, 2020*), fruits and vegetables, dairy and milk products, meat and fish, animal fodder, seeds, fertilizers and pesticides, agriculture produce, drugs, pharmaceuticals, medical devices, their raw material and intermediaries during the lockdown by companies operating under e-commerce sector.

With more relaxation in later lockdown phases, the e-commerce sector has witnessed a high demand even in non-essential goods. Therefore, several e-commerce platforms have tied-up with entities to cope up with the increased demand. ITC Foods Limited has partnered with Dominos Pizza Inc., Flipkart tied up with Tata Consumer Products Limited, Spencer Retail Limited and Uber Technologies Inc. (Kang, 2020). In the same time, e-commerce companies are also facing several challenges to match the demand-supply chain in India. The mismanagement of logistics, understaffing of employees/labour, and continual demand of goods by customers have led to an uneven supply to the needy in time. As a measure to address these challenges, many e-commerce giants (e.g. Amazon etc.) have undertaken several steps like suspension of 6000 sellers for price surging and hiring additional 75,000 individuals to meet customer demand (ETech, 2020). The Government of India has further eased the restriction in Lockdown 3.0, Lockdown-4, Unlock-1, Unlock-2 and Unlock-3. This step was much needed not just from a convenience perspective; it helped sellers of non-essential goods and the e-commerce entities through increased sales.

The preventive health measures like social distancing during lockdown phases have increased hygiene consciousness among costumers. This will also have an impact on the way consumers will shop shortly. This would also result in an increased shift in consumers, particularly young consumers, buying from traditional shopping methods to shopping digitally. From the online shopping perspectives, e-commerce entities required to will adopt innovative ideas to meet the change in consumer behaviour during COVID-19 lockdown. Government of India also is providing impetus to the digital space by introducing guidelines to encourage more and more retail traders to use e-commerce platforms effectively (MyGov, 2020). COVID-19 already brought a sea change in not just day-to-day lives across the world but also in the way we shop. Hence with removal of restriction in e-commerce, the e-commerce industry may not only witness changes in the approach of customers in terms of buying pattern of such customers but also face challenges due to the after-effects of lockdown.

From the above discussion, the imposition of lockdown measures by the government makes people prefer online shopping over traditional shopping. So, understanding shopping attitude during and post COVID-19 would help e-commerce industries to push the online sellers. Studying online consumer shopping attitude, shopping intention, and shopping values are not new phenomena (Pera, 2020; George et al., 2020; Lim et al., 2014; Mutlu & Tufan, 2015; Umit & Ozan, 2015; İbrahim & Yavuz, 2016). But studying consumer behaviour towards online shopping during COVID-19 can help all the e-commerce stakeholders to make better strategies to increase profit and provide better shopping experiences to the consumers. Therefore, this study investigates the link between online consumer attitude, intention and the moderating effect of gender in uncertain COVID-19 environment.

LITERATURE REVIEW

Two basic formats of shopping exist in today's shopping environment are store format and non-store format. Due to COVID-19 pandemic preventive measures, the Internet has become an effective means for carrying out commercial transactions online (Mayer, 2020; Pera, 2020; Sanjanwala & Issac, 2020). The main motivations for consumers to shop online during the COVID-19 are the personal safety along with other benefits like diversified selection, convenience, information, customization, interaction and time efficiency (Mayer, 2020; Pera, 2020). Globally, India is one the youngest online population and expected to continue in coming years. Understanding the nature of motivations, perceptions, attitudes, shopping values and intentions among young Indians during a pandemic are essential for all the stakeholders. But, from the past literature, it was evident that: (1) the relations between consumers shopping attitude, shopping values and shopping intention have not been explored in the pandemic situation like COVID-19; (2) the demographic factors and their relationship with different costumer behaviours have not been generalized so far due to conflicting results in the past studies (George, 2020; Al-Shukri & Udayanan, 2019; Hernández et al., 2011; Bridges & Florsheim, 2008). Therefore, a comprehensive study is required to understand how the shopping attitude, shopping values and shopping intention related to each other and varies with demographic factor like gender. Some of the essential characteristics of shopping behaviour are being discussed below.

Shopping Attitude

Consumer's attitude towards online shopping refers to their psychological state in terms of making purchases over the Internet. Huang & Liaw (2005) define online shopping attitude as *"an individual's overall evaluation of online shopping as a way of shopping."* Chiu et al. (2005) defined attitude towards online shopping as *"a consumer's positive or negative evaluations, emotions, or action tendencies related to the purchasing behaviour on the internet"*. Yang & Wu (2007) indicate attitude towards online shopping is a significant predictor of online shopping intentions. Gender also plays an essential role in shopping attitude (George et al., 2020). According to Li et al. (1999), men have accepted the use of technology and favouring the Internet as a shopping intermediary compared to women. Awad & Ragowsky (2008) suggested that one of the main reasons for this is that men do not associate shopping with emotion. Women tend to look for a review of the product more than men before online purchasing. Doolin et al. (2005) had also confirmed the above findings. Men perceive the convenience and easiness of the process to be more valuable. The issues women have with online shopping are generally not applicable to men. Hasan (2010) believed that men are more engaged with online shopping is due to factors such as specific personal attributes, behaviours and attitudes. Dennis & McCall (2005) argued that men are engaged online because of the technological element. Zhou et al. (2007) suggested that there is a negative perception surrounding women and technology. It has been reported that women more than men are doubtful about the authenticity of online shopping and sometimes shy away from the unknown. Kaplan (2011) also suggested that the emergence of social networks has engaged more women in online shopping because of the availability of conversing, liking and giving feedback about products efficiently and effectively. Various past researchers have established that the relationship between consumers' online retail shopping attitudes and retail purchase intentions is moderated by gender (George et al., 2020; Arora & Aggarwal, 2018; Noble et al., 2009; Argo et al., 2006; Ng, 2004; Sengupta et al., 2002).

Utilitarian and Hedonic Shopping Values

According to Babin et al. (1994), hedonic and utilitarian outcomes affect many shopping activities. Therefore, there is an increasing need to assess consumers' perceptions of both utilitarian and hedonic shopping values. Some consumers see shopping at work and do not consider the entertaining aspect of shopping. Many consumers shop because they enjoy the activity. Such perspectives reflect utilitarianism and hedonism behaviour of shopping. The utilitarian perspective assumes the buyer as a logical problem solver (Sarkar, 2011). According to To et al. (2007), Utilitarian motivation emphasized whether the mission is completed or not. In online shopping literature, *"perceived utilitarian value"* is an important variable that affects online shopping intentions. Many researchers (Parasuraman & Grewal, 2000; Chiu et al., 2005; Hume, 2008) indicate that perceived utilitarian value has a positive relationship with the intention to purchase/repurchase. Several studies have observed that the perceived utilitarian value can affect an individual's need to seek alternatives. That means when the perceived value is low, customers can switch to other product/service providers (Anderson & Srinivasan, 2003; Chang, 2006), but when a purchase offers high level of perceived Utilitarian value, this will improve the future purchase and repurchase.

In contrast to the Utilitarian perspective, hedonic shopping value is viewed as a positive experience. Kim (2006) observed that in Utilitarian shopping activities, consumers enjoy an emotionally satisfying experience related to the shopping activity, regardless of whether or not a purchase is made. The hedonic aspect of shopping includes happiness, fantasy, awakening, sensuality, and enjoyment. If a consumer has a hedonic motivation, he or she receives benefits from the experiential and emotional aspects of shopping. Hirschman & Holbrook (1982) suggest that the utilitarian and hedonic buying models differ in four main areas: mental constructs, product classes, product usage, gender and individual differences. Various past studies have established the role of shopping attitude to determine shopping values; the influence of shopping values to predicts shopping intention; and the mediating role of gender (Chen et al., 2019; Nopnukulvised et al., 2019; Chung, 2015; Olsen & Skallerud, 2011).

Shopping Intention

Shopping intention defined as *"consumers' willingness to purchase certain products or services from the online buying website"* (Ailawadi et al., 2001). Purchase intention has been broadly used as a focal construct to indicate consumers' buying behaviour in market research (Yang & Mao, 2014). Purchase intention also can be defined as *"the probability that customers will aim or be disposed to buy any product and service later"* (Wu et al., 2011). According to Huang & Su (2011),

"consumers' purchase intention can be classified as a part of a consumers' cognitive behaviour that discloses the way of a person is expected to purchase any specific product".

Moreover, measurement of purchase intention indicates future purchasing behaviour of customer (Grewal et al., 1998). The results of the purchase intention are used to predict the demand for new products. Bai et al. (2008) stated that final purchasing behaviour could be derived from consumer intention. Therefore, it is essential to understand the purchase intention. Currently, online sellers are not only focusing on convincing consumers to use the websites that sell their goods but also influencing the consumers to repeat purchasing their products through the channels (Chiu et al., 2012; Raman, 2019).

According to He et al. (2008) the main barrier to the growth of the online business is the lack of consumer intention to shop online. According to the theory of planned behaviour (TPB), it indicates that the intention to do online shopping is mostly affected by the consumers' behaviour and the behaviour from the people around them. Moreover, Jamil & Mat (2011) also presented that consumers purchase intention positively affects the expected online purchasing response. In different researches, the attitude toward online shopping had a significant effected on online purchase (Limayem et al., 2000). Various other studies also supported the same results for the relationship between attitude and online shopping intentions (Arora & Aggarwal, 2018). Many researchers argue that, although the attitude is a good proxy for measuring intention but still different external variables like gender influence the intention of a person to perform the behaviour (George et al., 2020; Arora & Aggarwal, 2018).

Many scholars explained the interrelation between shopping attitude, shopping values and shopping intention using different theories. Davis (1986; 1989) introduced the Technology Acceptance Model (TAM), which is based on the Theory of Reasoned Action (TRA). The Technology Acceptance Model (TAM) assumes technological acceptance/adoption/intention of individuals in online shopping. Some scholars (e.g. Rafique et al., 2020; Portz et al., 2019; Sun & Zhang, 2006) accept TAM as one of the most successful theories for analyzing technology acceptance of individuals relating attitude and intention-behaviour. Many of the have used the TAM by extending the theory with new dimensions studies (Rafique et al., 2020; Ha & Stoel, 2009).

The conceptual framework guides the researchers in determining the result and the statistical relationship that will be examined between the dependent variable and independent variables. Figure 1 depicted the proposed theoretical framework based on the basic principle of TAM and consumer value theory. The conceptual framework is proposed to identify the significant relationship between independent and dependent variables (e.g. shopping intention, shopping values and shopping intention). It also showed the moderating effect of gender on the relationship between shopping attitude, shopping value and shopping intention during COVID-19.

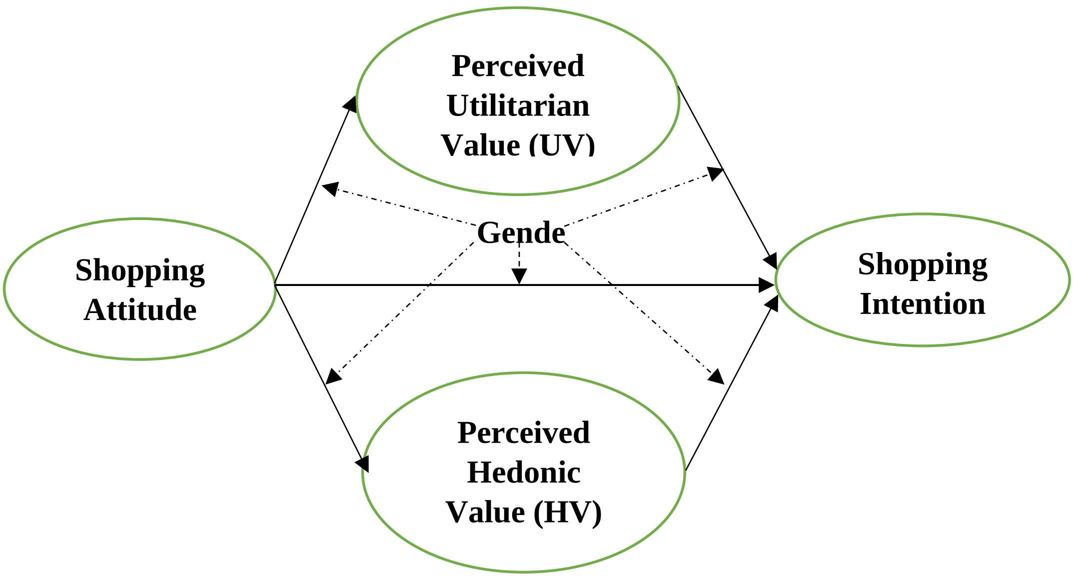

FIGURE 1
CONCEPTUAL MODEL

RESEARCH METHODOLOGY

Based on the proposed theoretical framework (Figure 1) and understanding from the past literatures, the following research hypothesis are proposed:

H1: Online shopping attitude has a statistically significant influence on utilitarian online shopping value.

H2: Online shopping attitude has a statistically significant influence on hedonic online shopping value.

H3: Gender significantly moderates the relation between attitude and utilitarian online shopping values

H4: Gender significantly moderates the relation between attitude and hedonic online shopping values

H5: Utilitarian online shopping value has a statistically significant influence on online shopping intention.

H6: Gender significantly moderate the relationship between Utilitarian shopping value and shopping intention

H7: Hedonic online shopping value has a statistically significant influence on online shopping intention.

H8: Gender significantly moderates the relationship between Hedonic shopping value and shopping intention.

H9: Shopping attitude significantly affects shopping intention.

H10: Gender significantly moderates the relationship between shopping attitude and shopping intention.

Sample

Theoretically, the population of this study consists of the online student shopper who is between 21-28 years old. A survey was conducted during April 01, 2020, to July 31 2020, among postgraduate business management students in different universities and institutions from central India to test the proposed framework using stratified sampling. Only those students who indicated they had used the online platform for shopping more than two years are considered for further analysis. Initially, a total of 360 responses were collected, and 316 were found suitable for further analysis. Demographics of the respondents revealed that 146 are female, and 170 are male (Table 1).

TABLE 1
DEMOGRAPHIC INFORMATION OF SAMPLE

Attribute	Characteristics	N	(%)
Gender	Male	170	58
	Female	146	42
Academic Background	Technical	180	54
	Non-Technical	136	46

Source: Author

RESULTS

A self-administered questionnaire was used for this research to obtain data. The questionnaire was carefully designed in English to meet the requirements of the research. It was divided into two sections. The first section covered demographic information (gender, academic background, and online spending per month, online shopping experience). Section-2 contained twenty-five items measuring different independent and dependent variables used in the proposed model. The questionnaire is comprised of items related to online shopping attitude, shopping satisfaction and online shopping intention. The items are taken from previous literature, and some were self-structured to cover the diversity of the research problem. Consumers' attitude towards online shopping is measured with five item questions developed by (Ranganathan, & Ganapathy, 2002). The online shopping intention is measured by 4 item questions developed by (Zarrad & Debabi, 2012). Utilitarian shopping values (six items) and Hedonic shopping values (ten items) are measured by the scales developed by (Babin et al., 1994; O'Brien, 2010). The five-point Likert scale ranged from (1) *'Strongly disagree'* to (5) *'Strongly agree'* is employed in this study. A pilot study was conducted on a small number of respondents (20) to assess the possibility of misinterpretation as well as any spelling or grammatical errors. The suggestions were subsequently incorporated into the final questionnaire.

Structural Equation Modeling (SEM) techniques are used to test the proposed model. SEM recently has gained popularity among researchers due to its flexibility and generality. The research hypotheses of this study are analyzed using Partial Least Squares (PLS) Structural Equations Modelling (PLS-SEM). PLS-SEM is a second-generation structural equation modelling technique developed by (Word, 1974). PLS-SEM has significant advantages over other SEM techniques in different ways (Hair et al., 2014). First, PLS-SEM works efficiently with small sample sizes and complex models. PLS-SEM makes no distributional assumptions (normal distribution) about underlying data. Second, PLS-SEM can easily handle reflective and formative measurement models, as well as single-item constructs, with no identification problems. Third, PLS-SEM provides more accurate estimates of moderation and mediation effects. Finally, PLS-SEM has higher statistical power in parameter estimation than other structural equations modelling techniques (Chin, 1998; Henseler et al., 2009). Due to the features mentioned above, PLS-SEM analysis method was preferred over regression-based techniques to test research hypotheses in this research model. R packages *plspm* (Sanches et al., 2015) and *semPLS* (Monecke, 2013) is used to obtain results in the study. Confirmatory Factor Analysis (CFA), Discriminant Validity, Path Analysis, and Chi-Square test are carried out in this study.

Confirmatory Factor Analysis (CFA) is a special form of factor analysis, most commonly used in social science research. It is the extended analysis of Exploratory Factor Analysis (EFA) and used to test whether measures of a construct consistent with a researcher's understanding of the nature of that construct (or factor). As such, the objective of the confirmatory factor analysis is to test whether the data fit a hypothesized measurement model. Model fit measures could then be obtained to assess how well the proposed model captured the covariance between all the items or measures in the model (Zainudin, 2012). All redundant items exist in a latent construct were either removed or constrained. The detailed of the model fitness estimations were presented in Table 2.

The other essential techniques used in this research was discriminant validity. Discriminant validity is the degree to which scores on a test do not correlate with scores from other tests that are not designed to assess the same construct. Correlation coefficients between measures of a construct and measures of conceptually different constructs are usually given as evidence of discriminant validity. If the correlation coefficient is high (>0.85), then the discriminant validity is considered weak (depending on the theoretical relationship and the magnitude of the coefficient). On the other hand, if the correlations are low to moderate, this demonstrates that the measure has discriminant validity. However, this threshold may be meaningless if the correlation matrix and square root of Average Variances Extracted (AVE) do not meet the requirement, especially during the implementation of the second-order construct in CFA. The detailed of CFA and discriminant validity is shown in Table 2.

Table 2
POOLED CFA AND DISCRIMINANT VALIDITY

Construct	Item	Factor Loading	Cronbach Alpha	CR	AVE
Shopping Attitude	ATT1	0.71	0.71	0.72	0.56
	ATT2	0.77			
	ATT3	0.79			
	ATT4	0.69			
	ATT5	0.67			
Shopping Intention	SI1	0.75	0.76	0.75	0.57
	SI2	0.76			
	SI3	0.79			
	SI4	0.76			

Utilitarian Shopping Value	USV1	0.66	0.71	0.70	0.53
	USV2	0.67			
	USV3	0.66			
	USV4	0.69			
	USV5	0.65			
	USV6	0.66			
Hedonic Shopping Value	HSV1	0.66	0.72	0.73	0.55
	HSV2	0.71			
	HSV3	0.76			
	HSV4	0.72			
	HSV5	0.69			
	HSV6	0.74			
	HSV7	0.65			
	HSV8	0.64			
	HSV9	0.69			
	HSV10	0.65			

Source: author

The table above Table 2 showed the Factor Loading, Cronbach Alpha, Composite Reliability (CR) and Average Variance Extracted (AVE) values for all latent constructs after Pooled CFA. All constructs have achieved the minimum estimation required, i.e. 0.70(Cronbach Alpha), 0.60 (CR) and 0.50 (AVE). Therefore, it is concluded that Convergent Validity (AVE > 0.5), Internal Reliability (Cronbach Alpha > 0.7) and Construct Reliability (CR> 0.6) of all constructs are achieved. Therefore, the proposed model is good enough for further analysis.

Further, to verify the discriminant validity of constructs used in the proposed model, the detailed analysis is conducted and shown in Table 3.

Table 3
DETAILED DISCRIMINANT ANALYSIS

Construct	Shopping Attitude	Shopping Intention	Utilitarian Shopping Value	Hedonic Shopping Value
Shopping Attitude	0.748			
Shopping Intention	0.71	0.754		
Utilitarian Shopping Value	0.67	0.65	0.728	
Hedonic Shopping Value	0.68	0.66	0.62	0.741

Source: author

From Table 3, it is found that all latent exogenous constructs are correlated with the correlation strength of less than 0.85. Therefore, the discriminant validity is achieved, and all latent exogenous constructs are kept in the full model. The diagonal values (in bold) are the square root of AVE (Table 3). The discriminant validity is generally achieved when a diagonal value (in bold) is higher than the values in its row and column. From the above result, it is concluded that the discriminant validity for all constructs is achieved. Finally, the fitness index of the model is presented in Table 4.

Table 4
MODEL FITNESS INDEXES

Model Indices	Values
Chi-square/degrees of freedom	1.8
Goodness-of-fit index (GFI)	0.95
Adjusted goodness-of-fit index (AGFI)	0.91
Normed fit index (NFI)	0.94

Tucker–Lewis index (TLI)	0.95
Comparative fit index (CFI)	0.96
Root mean square error of approximation (RMSEA)	0.06

Source: author

Table 4 shows that all fitness indexes values have achieved the required level (Hair et al., 2014). Therefore, the model is good enough for further analysis.

Structural Model Assessment

After confirming the reliability and validity of the proposed constructs, the next step is to evaluate the structural model results. It involves examining the model's predictive capabilities and the relationships between the constructs. According to Hair et al. (2014), the key criteria for evaluating the structural model are the significance of path coefficient, the level of R^2 values, the f^2 effect size, the predictive relevance (Q^2), and q^2 effect size. After running the PLS-SEM algorithm, the path coefficients estimates are obtained for the structural model relationships. The path coefficients and statistical significance are obtained utilizing the bootstrapping. Besides, to assess the model's predictive relevance, Stone-Geisser's Q^2 values are also obtained by using the blindfolding procedure. Tables 5 and 6 show the results of the hypothesis testing, structural relationships, p-value, and Stone-Geisser's Q^2 values.

Table 5
PLS RESULTS FOR STRUCTURAL MODEL AND HYPOTHESIS TESTING

Path	Path Coefficients	Std. Error	T-statistics*	P-value	Hypothesis	Decisions
SA→ UV	0.67	0.06	4.67	0.00	H1	Accepted
SA→HV	0.59	0.07	3.89	0.01	H2	Accepted
UV→SI	0.47	0.05	6.34	0.02	H5	Accepted
HV→SI	0.53	0.09	5.89	0.00	H7	Accepted
SA→SI	0.52	0.02	5.17	0.00	H9	Accepted

* t-values for two-tailed test: 1.65 (sig.level 10%), 1.96 (sig.level 5%), 2.58 (sig.level 1%).
Source: author

According to the obtained results (Table 5), the shopping attitude had a positive and statistically significant effect on the Utilitarian shopping value (β=0.67, P<0.01). This result empirically supported Hypothesis 1. Also, the shopping attitude has a positive and statistically significant effect on hedonic shopping value (β=0.59, P<0.05). This result empirically supported Hypothesis 2. The result is also revealed that the perceived utilitarian value construct has a positive and statistically significant effect on online shopping intentions (β=0.47, P<0.05). Hence empirically supported Hypothesis 5. Furthermore, the perceived hedonic value construct has a positive and statistically significant effect on online shopping intentions (β=0.53, P<0.01). Thus Hypothesis 7 is found valid. Finally, the online shopping attitude has a positive and statistically significant effect on online shopping intentions construct (β=0.52, P<0.01). So, the result of empirically supported Hypothesis 9. Similar findings were reported by various researchers (Mutlu & Tufan, 2015; Arpita & Sapna, 2011; Teo & Liu, 2007; Reynalds & Arnold, 2006; Anderson & Srinivasan, 2003; Devaraj et al., 2003) in their studies. In contrary, Umit & Ozan (2015) showed no significant relationship between Utilitarian value and buying intention.

Further, to examine the predictive strength of the relationship between the dependent and independent variables, the coefficient of determination (R^2) values are considered (Hair et al., 2014). This coefficient is a measure of the model's predictive accuracy. The R^2 value represents the amount of explained variance of the endogenous constructs in the structural model. In general, the R^2 values of 0.75, 0.50, and 0.25 for the endogenous constructs can be considered substantial, moderate, and weak, respectively (Hair et al., 2014). The R^2 values of Online Shopping Attitude (0.51), Online Shopping Intentions (0.52) is considered large, while the R^2 value of Hedonic Online Shopping Value (0.49) and Utilitarian value (0.46) are moderate (Table 6). The R^2 values of endogenous latent variables are range from 0.46 to 0.52, which indicates the model's predictive accuracy.

Table 6
PLS RESULTS FOR ENDOGENOUS LATENT CONSTRUCTS R^2 AND Q^2

Endogenous Latent Constructs	R^2	Q^2	Effect Size
SA	0.51	0.46	Large
UV	0.46	0.34	Medium
HV	0.49	0.31	Medium
SI	0.52	0.41	Large

*Assessing predictive relevance (Q^2) value of the effect size: 0.02= Small, 0.15= Medium, 0.35= Large. Source: author

Again, Stone-Geisser's Q^2 values are also examined to assess the model's predictive relevance. Q^2 value more than zero for a specific reflective endogenous latent variable indicates the model's predictive relevance for a particular construct. Table 7 shows the results of Stone-Geisser's (Q^2) values for endogenous constructs using the blindfolding procedure. The predictive relevance (Q^2) values of Online Shopping Attitude (0.46) and Online Shopping Intentions (0.41) are considered as a large effect size. Utilitarian Online Shopping Value (0.34) is considered a medium effect size, and Hedonic Online Shopping Value (0.31) is considered a medium effect size (Hair et al., 2014). From the above results, it is observed that the Q^2 values of all the endogenous latent variables are above zero (ranging from 0.31 to 0.46), which supports the model's predictive relevance for the endogenous constructs.

Moderation Effect

According to Preacher et al. (2007), moderation occurs when the strength of the relationship between two variables is dependent on a third variable. Moderator (*W*), interacts with *X* in predicting *Y* if the regression weight of *Y* on *X* varies as a function of *W*. Moderation is typically assessed with the regression equation:

$$Y = a_0 + a_1 X + a_2 W + a_3 XW + r \quad (1)$$

Where *W* is considered the moderator, the above equation may be expressed as

$$Y = (a_0 + a_2 W) + (a_1 + a_3 W) X + r \quad (2)$$

Equation (2) shows how the simple slope of *Y* regressed on *X*. $(a_1 + a_3 W)$ is the function of the moderator. T-statistics was used to calculate the difference in paths between groups of the sample. In this study, the equal variance of the t-test is implemented. The equation (3), shows the formula to calculate t statistics.

$$t= \frac{Path_{sample(1)} - Path_{sample(2)}}{\left[\frac{(m-1)^2}{(m+n-2)} * STERR^2_{sample(1)} + \frac{(n-1)^2}{(m+n-2)} * STERR^2_{sample(2)}\right] * \left[\sqrt{\frac{1}{m}+\frac{1}{n}}\right]} \quad (3)$$

Where:
m = number of samples 1
n = number of samples 2
$Path_{sample(i)}$= sample mean for i group(s)
$STERR_{sample(i)}$= the square of standard error for i groups(s)

The best fit model for all samples is analyzed using CFA, Discriminant Analysis and Path Analysis. In this study, Pooled CFA is used. For moderation analysis, first, the data is divided into two groups (i.e. male and female groups**).** Following the above step, the Bootstrap Analysis is applied to the overall, male and female samples separately. The difference of results before and after the data separation is recorded. The sample size, the sample mean (M) and sample standard error (STERR) for male and female samples are determined for moderation analysis. The t-statistics are also determined based on the procedure suggested by (Chin, 2000).

Table 7
BOOTSTRAP ANALYSIS FOR THE OVERALL SAMPLE

Overall Sample	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)
SA→ UV	0.171	0.179	0.125
SA→HV	0.161	0.163	0.119
UV→SI	0.156	0.161	0.110
HV→SI	0.143	0.144	0.109
SA→SI	0.182	0.184	0.131

Source: author

Table 7 shows the original sample (O), sample (M) and standard error (STERR) for the overall sample. The values presented in the Table 7 describes the path coefficients for the overall sample without including the heterogeneity factor existing in the model.

Table 8
PATH COEFFICIENT FOR MALE

Overall Sample	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)
SA→ UV	0.110	0.119	0.102
SA→HV	0.163	0.169	0.112
UV→SI	0.106	0.111	0.104
HV→SI	0.103	0.114	0.097
SA→SI	0.122	0.108	0.114

Source: author

Table 8 shows the original sample (O), sample (M) and standard error (STERR) for male. From the results, it can be observed that the scores obtained for the male sample are different from the overall sample. Taking sample mean (M) scores into consideration for prior analysis, scores for all exogenous latent constructs for male sample compared to overall sample are: 0.119 < 0.179 (SA→ UV), 0.169 > 0.163 (SA→HV), 0.111< 0.161 (UV→SI), 0.114 < 0.144 (HV→SI**)** and 0.108< 0.184 (SA→SI).

Table 9
Path Coefficient for female

Overall Sample	Original Sample(O)	Sample Mean(M)	Standard Error (STERR)
SA→ UV	0.115	0.117	0.112
SA→HV	0.171	0.141	0.103
UV→SI	0.113	0.112	0.109
HV→SI	0.112	0.115	0.102

SA→SI	0.123	0.109	0.107

Source: author

Table 9 shows the original sample (O), the sample mean (M) and standard error (STERR) for female samples. It can be seen that the scores obtained for the female sample are different from the overall sample. Taking sample mean (M) scores into consideration, scores for all exogenous latent constructs for female sample compared to overall sample are: 0.117 < 0.179 (SA→ UV), 0.141< 0.163 (SA→HV), 0.112 < 0.161 (UV→SI), 0.115< 0.144 (HV→SI**)** and 0.109< 0.184 (SA→SI). Substituting the values of Sample Mean (M) and Standard Error (STERR) of Path Coefficient of male and female samples into equation (1), (2) and (3), the significance of path coefficients is presented in Table 10.

Table 10
SIGNIFICANCE OF PATH COEFFICIENT DIFFERENCE

	t- statistics	Hypothesis Decisions
SA→ UV	1.06	H3 Rejected
SA→HV	1.11	H4 Rejected
UV→SI	0.89	H6 Rejected
HV→SI	1.14	H8 Rejected
SA→SI	2.01	H10 Accepted

Source: author

The t-values of all exogenous latent constructs toward endogenous latent construct (i.e. SA→ UV, SA→HV, UV→SI, HV→SI) are less than 1.96 (Table 10). So, moderation effects are not significant. Hence H3, H4, H6 and H8 are rejected. But the significance moderation effect (t=2.01) is observed for the relation (SA→SI). That is gender plays a significant moderation role in the relationship between shopping attitude and shopping intention. Thus hypothesis (H10) is accepted.

DISCUSSION

Theoretical Foundation

In today's digital economy, the Internet has become an essential tool for online purchasing. Online retailers are trying to influence consumers' shopping attitude and behaviour by creating an enhanced shopping experience. But the COVID-19 pandemic has induced fear among e-shoppers, particularly among young people. Firstly, due to the contagious nature of the virus, as the COVID-19 virus can live on packaging surfaces from three hours to up to three days, depending on the packaging material. Secondly, the delay in delivery of the products due to lockdown measures taken by the authorities is another concern among costumers. At the same time, people's are reluctant to go out due to the lockdown measures and fear, therefore mostly preferring online shopping. All of the above factors have primarily influenced shopping behaviour among shoppers. Therefore, the present study is designated to reassess the antecedents of consumer online shopping intention during COVID-19 lockdown. This study extended the existing Technology Acceptance Model (TAM) and consumer value theory, by including consumer utilitarian and hedonic value, shopping attitude to determine the effects of consumer' perceived online shopping intentions during COVID-19. The results found in this research provided strong support for the proposed research model of online shopping intentions even during COVID-19. The results revealed that the perceived online shopping attitude significantly determine the consumer perceived utilitarian and hedonic value. Again, consumers' perceived utilitarian and hedonic value significantly determines the consumers shopping intention. The results are consistent with the findings of previous research on online shopping intentions (e.g., Lim, 2015; Teo & Liu, 2007). Therefore, to improve consumer perceptions of utilitarian value during COVID-19, online retailers must provide the consumers' a more diversified products selection at a lower cost, quick access to large volumes of product and service information, and a more comfortable and convenient shopping environment. Further, during COVID-19 pandemic, consumers are demanding more pleasure and entertainment from the online retailer beyond the utilitarian value. Hence, this study suggests that to improve consumer perceptions of utilitarian value, online retailers must provide consumers with the more pleasurable shopping experience with utmost care. Furthermore, the results also revealed that the perceived hedonic value, online shopping attitude and perceived utilitarian value are significant determinants of consumer Intention. The findings are consistent with the findings of previous research on online customer shopping or repurchasing intentions (e.g., Anderson & Srinivasan, 2003; Devaraj et al., 2003; Reynalds & Arnold, 2006). Hence, this study suggests that to generate online shopping intentions and to ensure consumers continue to shop from online retailers, the service providers must satisfy customers' expectations and generate high-level utilitarian and hedonic value during the pandemic.

Role of Gender

This study also observed the difference in online shopping intention among male and female during COVID-19. Recently, Mayer (2020) found a significant impact of gender on shopping behaviour during COVID-19. The study showed that the shopping behaviour of male impacted more by COVID-9 than female. It was also observed that men prefer online shopping, avoiding in-store shopping more than women. Lim & Rashad (2014) also found similar results in their research in the non-pandemic situation. They found that the consumer attitude, which influences future intentions of online purchasing, is different concerning gender. According to Hernandez et al. (2010), females are less likely to change their future intentions in comparison to males. However, according to Garbarino & Strahilevitz (2004), females more easily changed their perceptions than males because of various factors like their friend's recommendation and suggestion etc. On the other hand, males showed a higher intention of online purchasing after they purchased online (George, 2020; Fang, 2016; Hernandez et al., 2010). Therefore, it was observed that there was no difference in shopping intentions among male and female before and during COVID-19 pandemic.

Contributions and Implications

Concerning the theoretical academic contribution, this study whilst contributing to a growing body of work on online shopping behaviour offers a diverse perspective on the different factors that trigger the usage and adoption of Internet shopping during the pandemic situation. Additionally, with the continuous growth of Internet use and adoption during COVID-19, a review of Internet shopping specific concepts or factors (stimuli) would offer a better explanation of online shopping intention. On the other hand, Asia e-commerce continues its rapid expansion in the last few years. The e-commerce sales forecast for Asian region is projecting an annual average increase of 14% estimated over the term (2020-2022). Asia provides investors with a large consumer base, favourable young adult demographics and growth in consumer spending. India's e-commerce market is also growing at a CAGR of 30% for gross merchandise value (Chandra, 2020). But India has a lot of potentials to boost e-commerce value further. Therefore, all the stakeholders should create a conducive environment based on the finding of this study to attract more young e-shoppers during and post COVID-19. The finding of this study has shown that the consumer's attitudes, which influences future intentions of online purchasing, are different vis-à-vis gender. Hence, all stakeholders should formulate different strategies to attract male and female shoppers separately.

The Strength, Weaknesses, Opportunities and Threats of e-commerce due to COVID-19 pandemic are presented below:

1. **Strengths**: Due to the announcement of lockdown measures by the authorities, all the physical stores were closed. Therefore, e-commerce platforms provide an alternative source of shopping for the peoples.
2. **Weaknesses:** Security is the biggest challenge into the progress of e-commerce even during COVID-19. The customer always found themselves insecure, especially about the integrity of the payment gateways and process. During COVID-19 lockdown, the product delivery takes longer due to the shortage of staffs and unavailability of transportation facilities. Only a limited number of products and their varieties are provided due to closure of factories and supply chain.
3. **Opportunities:** During COVID-19, peoples don't want to go out for shopping due to fear and lockdown down restrictions. So, e-shopping remains only alternatives to meet people's needs. It is an opportunity for e-commerce stakeholders to increase e-commerce penetration in India.
4. **Threats**: During COVID-19 pandemic lockdown, the only threat to e-commerce is a fake and fraud e-commerce portal, which can affect the peoples' faith in e-shopping.

CONCLUSIONS, LIMITATIONS AND FUTURE DIRECTIONS

As peoples around the globe embraced social distancing as a way to slow the spread of the COVID-19 pandemic, there has naturally been a drop-off in brick-and-mortar shopping. That would seem to increase online shopping activities. To understand the antecedent of online shopping intention, this study successfully extended the technology acceptance model (TAM) and consumer value theory in the context of online shopping. The analyses result provided strong support for the proposed research model of online shopping intentions during COVID-19. Finally, analysis of the findings suggested that consumer beliefs, attitudes toward online shopping, perceived hedonic and utilitarian value to explain consumer online shopping intentions even during COVID-19.

The findings of this study give some useful insights into the consumers' online shopping intentions during COVID-19. However, the results of this study should be viewed with some limitations. First, the data were obtained only from central India, which may lead to sampling bias. Therefore, future research should extend this study to pan India, having different societies and cultures. Secondly, the antecedents of online shopping intentions explained a significant amount of its variance in this research model. Still, other important factors during COVID-19 (e.g. such as consumers shopping satisfaction, consumer perceived risk and trust dimensions), which have not been included in the model, may help to explain online shopping intentions better. Concerning these considerations, the results of this study will provide a useful source for further research study.

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