

An empirical study on the factors influencing online shopping behavior

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Keywords

Online shopping behavior, attitude, subjective norm, perceived usefulness and trust.

Abstract

Online shopping is getting popular day by day since consumers can shop whenever, wherever and whatever they like. The present study aims at determining the factors influencing online shopping behavior. It also tries to examine the mediating effect of technological knowledge on the relationship between the determining factors and online shopping behavior. Data have been collected from 390 respondents who have online shopping experiences. The data of this study have been collected from the respondents with a structured questionnaire survey with a five-point likert scale. Partial Least Square Structural Equation Modeling (PLS SEM) technique with the support of smart PLS 2.0M3 software has been used for analyzing the collected data. The data analysis findings reveal that convenience attitude is the most significant followed by trust, subjective norm, technological knowledge and perceived usefulness in influencing online shopping behavior. On the other hand, technological knowledge partially mediates the relationship between attitude and online shopping behavior; and relationship between perceived usefulness and online shopping behavior. The findings of this study might be helpful for the firms doing online business or intending to ship their business from brick and mortar to click and mortar.

Introduction

Research interest on online shopping has gained much attention as e-commerce has potential growth in recent years and thus many successful retailers are seeking for global penetration especially through e-commerce. E-commerce is the easier and faster way to expand business at low cost and it provides opportunities for global retailers to make their brands global. Thus, the way of doing business has changed tremendously worldwide due to technological advancement. According to data statistics, 52% of the world population is internet users (Internet W. S., 2018). That gives us an indication of how e-commerce is going to influence the future of our business and social life. In 2017, the worldwide e-commerce sales amounted to 2.3 trillion USD and projected to reach 4.88 trillion USD by 2021 (eMarketer, 2018). Bangladesh itself has achieved rapid development in the adoption of broadband services within a short time period with the household broadband penetration rate of 6 percent in 2006 to 18.7 percent in 2016 surpassing the target of 50 percent penetration rate set in 2010 (MCMC, 2018). According to Internet Service Provider (ISP, 2017), the population penetration rate of the broadband subscriptions in Bangladesh is 38.1 percent. However, in Bangladesh e-commerce is still at developing phase though it started in the late 1990s (e-cab, 2016). The situation started changing in 2012-2013 when two e-commerce site akhoni and ajkerdeal introduced themselves to the online consumers. Some foreign investors like Olx, daraz, and kaymu joined the competition along with local ones (Rashed, 2017). A site named rokomari.com is selling books online like Amazon and the organization is expanding business into other product categories. Bikroy.com is providing both buying and selling options for the consumer goods in their platform. Online food delivery services also got a very positive response from food lovers. Due to high traffic congestion, consumers prefer ordering food online to visiting the restaurant. The growing popularity of online shopping and

increased number of internet users are showing great prospect of e-commerce development in Bangladesh.

E-Commerce Index 2016 shown that Bangladesh is one of the top 10 economies by the difference between the predicted and actual share of internet users buying online (UNCTAD, 2016). In November 2017, a report published by New Age (daily newspaper) mentioned that e-commerce sector is expected to grow 70% and the market size is estimated \$110-115 million compared to 2016, which was \$65-70 million. Though e-commerce only contributes 0.7% of the country's total retail market (newagebd, 2017). Another report shows that the current e-commerce market size is increased to \$230-240 million and annual growth is 45-50% (Muhammad, 2018). On the other hand, around 50,000 people are actively engaged in e-commerce while approximately 1,000,000 people are employed in the sector (Islam, 2018). In a related finding, Hasan et al., (2016) stated that a good number of the households in Bangladesh own a computer, 36 percent of the population is connected to the internet and a good number of the active users purchase products and services online. These findings show that Bangladesh has potential growth in e-commerce and therefore it is important to understand the online shopping behavior of consumers. Though the internet usage rate is increasing rapidly, the number of online shoppers is not increasing at a similar pace. Moreover, contribution of e-commerce as a percentage of GDP of Bangladesh is less than 1% which is much lower compared to other sectors (Islam, 2018). On the other hand, there is still dearth of empirical studies related to the determinants of online shopping behavior in a developing country like Bangladesh. Only a few studies have been conducted in Bangladesh on online shopping. Emon and Rupom (2017) conducted a study to get insights from the online shoppers in Bangladesh and they found that online customers were not satisfied with the online stores. Karim and Xu (2018) conducted a study on the characteristics of Bangladesh e-commerce, its past and present development based on secondary data (Karim & Xu, 2018). They also tried to know the perception of online consumers and the challenges consumers face shopping online. So, the above discussion depicts that only a few studies have been conducted on the online shopping in Bangladesh. Moreover, the factors that might influence online shopping behavior in the context of Bangladesh are still unexplored. From that ground the present study aims at identifying the important factors influencing online shopping behavior among the Bangladeshi customers. Hence the prime objective of this study is to identify the important factors influencing online shopping behavior.

2. Literature Review

The present study is designed to explore the factors influencing online shopping behavior of the Bangladeshi customers. The present study's theoretical basis is the Theory of Planned Behavior (TPB) that is a popular theory for understanding human behavior. The TPB has been used in different contexts such as understanding consumer behavior with regards to the environment and energy conservation (Macovei, 2015). The drivers of the customer behavior can be ranging from the internal factor such as attitudes towards the behavior to the external factors such as influence from the families, friends and social media, perceived usefulness of the website and also trust to the retailers or the quality of the goods purchased from the online store. In the next section, the key factors influencing online shopping behavior will be explained in detail by referring to the previous studies.

2.1 Attitude

Attitude is a person's overall evaluation of a concept (Faizo 1986). These evaluations can be created by both affective and cognitive systems (Fishbein & Ajzen 1981). A definition by Wu and Wang (2014) stated that attitude is a psychological inclination expressed by accessing a particular entity with some degree of favor or disfavor and it is built through affective, cognitive and behavioral appraisal. Attitude is the positive or negative cognitive evaluation, emotional feeling and behavioral tendency held by customers during transaction (Lai & Wang, 2012). It influences customers' judgment and evaluation during transaction, and it would affect the perception towards

the sellers (Lai & Wang, 2012). Thus, attitudes are an outcome of psychological process that cannot be directly observable or measurable but can be inferred from what people say or what they do (Alam & Iqbal 2007). According to Fishbein (1980), attitude is the most important concepts used by marketers to understand the consumers purchase behavior. Convenient attitude is found to positively influence behavioral intention (Hidayanto et al., 2012; Hsu et al., 2013; Lai & Wang, 2012). Other studies also found that a convenient attitude significantly influences the purchase intention (Husin & Rahman, 2013; Phau et al., 2013; Wu et al., 2014). The social psychology literature on behavioral research has established attitude as an important predictor of behavior, behavioral intention, and explanatory factors of variants in individual behavior (Diallo et al., 2013; Husin & Rahman, 2013; Li, Robson & Coates, 2013; Petruzzellis, 2010; Wu et al., 2014). Therefore, the present study hypothesizes that;

Hypothesis 1: Attitude positively influences online shopping behavior.

2.2 Subjective Norm

According to Ajzen (1991), subjective norm is the perceived social pressure to perform or not to perform the behavior. Social pressure can influence one's behavior in different ways in different societies (Husin & Rahman, 2013). Subjective norm can be gauged from other people's normative expectations and motivation to comply with these expectations (Orapin, 2009). Consumers get influenced by public opinions and the expectations from specific groups (Xie et al., 2011). According to Husin and Rahman (2013), consumers' decision making is influenced by family members, friends, religious teachers and mass media such as newspapers, televisions, magazines. Consumers typically make decisions based on the influence and information gathered from reference groups such as friends, parents, and teachers. Nonetheless, the information gathered is transformed to knowledge where it influences consumers' decision process regarding their purchase behavior (Childers & Rao 1992). Previous studies (Husin & Rahman, 2013; David, Tong, Yin, 2012) also supported that subjective norms might influence human behavior. Study by Nordin and Nik (2011) demonstrated that there is a positive relationship between subjective norm and consumer behavior. Therefore, it is hypothesized that;

H2: Subjective norm positively influences online shopping behavior.

2.3 Perceived usefulness

Perceived usefulness is defined as the extent to which consumers feel the online website could add value and efficacy to them when performing online shopping (Hu et al., 2009; Lai & Wang, 2012). Perceived usefulness is also defined as the individual's point of view that using a system would increase or improve job performance (Zhu, Lee, O'Neal & Chen, 2009; Liao et al., 2013). The perceived usefulness of the website depends on the efficiency of technological characteristics such as advanced search engines and the personal service provided by service provider to consumers through the online website although there is no direct contact between them (Kim & Song, 2010). Various information and high-quality goods descriptions must be provided to the customers in order to increase the usefulness of an online store (Chen, Gillenson & Sherrell, 2002). Hernandez et al., (2011) revealed that perceived usefulness has significant effect on online shopping behavior in Spain but Aghdaie et al., (2011) suggested that perceived usefulness does not have significant effect on online purchasing behavior in Iran. Other studies conducted by Enrique et al., (2008), Kim & Song (2010) and Xie et al. (2011), found that perceived usefulness is a significant predictor of intention to purchase via internet. Several studies showed positive relationship between perceived usefulness and consumer behavior (Aghdaie et al., 2011; Hernandez et al., 2011; Ndubisi & Jantan, 2003). As most of the previous studies evidenced that perceived usefulness is an important determinant of behavior, this study hypothesizes that;

H3: Perceived usefulness of website positively influences online shopping behavior.

2.4 Trust

Trust is important in online transactions as both the buyers and sellers are mostly unknown to each other. Trust is based on the rational assessment of an individual's ability and integrity, and on feeling of concern and good intention (Roca, Garcia, & Vega, 2009). In the online environment, trust is built primarily in a person-to-website manner rather than person-to-person communication, mediated through technology (Limbu et al., 2012). According to Kim & Song (2010), trust is the most important dimension in online transactions and thus online stores should emphasize on building and maintaining trust. Lack of trust is one of the main reasons for customers not engaging in online purchase (Limbu et al., 2012). Essential condition for trust in online retailing includes reliability of the website, performance and transaction between an online seller and the buyers (Limbu et al., 2012). Rahbar and Wahid (2011), Hou and Yu (2009), found that trust positively and significantly influences actual purchase behavior of the consumers. According to Aghdaie et al., (2011), consumer trust in online transaction is more important than in traditional markets. The result is consistent with that of Kim & Song (2010) who suggested that trust might lead to actual online shopping behavior. Therefore, it is hypothesized that;

H4: Trust positively influences online shopping behavior.

2.5 Mediating Effect of Technological Knowledge

Knowledge is essential for comprehending new technology. According to Rogers (2003), knowledge occurs when potential adopters learn about the existence of an innovation and gain some understanding concerning its functionality. Sometimes researchers use the term self-efficacy to define the ability to perform a specific task. Social cognitive theory proposes that self-efficacy is the belief that one has the ability to perform a specific behavior (Compeau & Higgins, 1995). So, in terms of online shopping, the individuals must have the technological knowledge to access internet and computer technology. An individual with high expertise may have a higher intention to use a system than an individual with lower expertise. Furthermore, technological knowledge helps in building confidence and trust with the firms as it may send a signal that they have really put in thought about their end users (Wang, Wang, Lin & Tang, 2003). There are some studies supporting the influence of technological knowledge on behavioral intentions (Luarn & Lin, 2005; Wang et al., 2006). Dwivedi et al., (2007) found that perceived technological knowledge is a significant factor for explaining consumers' intention to adopt new technology. While previous studies (Luarn & Lin, 2005; Wang et al., 2006; Vasseur & Kemp, 2015) examined the direct effect of technological knowledge in relation to behavioral intention and actual behavior, the present study intends to examine the mediating effect of technological knowledge in the relationship between the determining factors and online shopping behavior. The inherent logic is that individuals might have positive attitude, reference group influences, trust and the perceived usefulness of the website of the stores, however without technological knowledge; it is not possible for them to shop online. Therefore, technological knowledge might work as mediating variable here. Under this backdrop, the present study examines the mediating effect of technological knowledge on the relationship between the determining factors (convenient attitude, subjective norm, perceived usefulness and trust) and online shopping behavior and the following hypotheses have been proposed;

H5: Technological knowledge positively influences online shopping behavior.

H6: Technological knowledge mediates the relationship between attitude and online shopping behavior.

H7: Technological knowledge mediates the relationship between subjective norm and online shopping behavior.

H8: Technological knowledge mediates the relationship between perceived usefulness and online shopping behavior.

H9: Technological knowledge mediates the relationship between trust and online shopping behavior.

3. Research methodology

In the previous chapter, literature review has demonstrated various studies related to online shopping. The variables that have been identified for investigation are; convenient attitude, subjective norm, perceived usefulness and trust in relation to online shopping behavior. Theory of Planned Behavior (TPB) is used as the theoretical basis of this study since it is widely used by the researchers to interpret and explain the user's behavioral action (Zhou, Dai, & Zhang, 2007). Out of the five study variables, two have been chosen from TPB without any change (attitude and subjective norm), perceived usefulness is from Technology Acceptance Model which is proved to be important in online shopping (Aref & Okasha, 2019) and trust is newly proposed determinant of OSB. The present study also examines the mediating effect of technological knowledge in the relationship between the determining factors (convenient attitude, subjective norm, perceived usefulness and trust) and online shopping behavior. This technological knowledge is similar to the self-efficacy construct of TPB. This research employs quantitative approach to investigate the online shopping behavior performed by the consumers in Bangladesh since the quantitative survey is very useful to investigate the social phenomenon either using statistical, mathematical or computational techniques (Laura & Leahey, 2008). Data were collected by distributing questionnaires on the importance of convenience attitude, subjective norm, perceived usefulness of website, technological knowledge and trust that influenced consumers' decision to purchase online. All the responses on the study variables were gathered on five-point Likert scale. The items were adapted from the previous researches (Aref & Okasha, 2019; Yi et al., 2016) because they were proved to be reliable and valid in previous studies. 650 sets of questionnaires were distributed among the students aged between 18 to 34 years in five universities in Bangladesh based on convenience sampling. University students have been chosen as the samples of the study since they are familiar with new technology. Moreover, questionnaire was given to only those students who had previous online shopping experiences. Each questionnaire was accompanied with a cover letter stating the purpose of the study, confidentiality of the questionnaires and instructions on how to answer the questionnaire. The researcher administered the questionnaires and distributed in the classes. 30 minutes were given to answer the questionnaires. Prior to the distribution, the researcher approached the lecturers for permission to distribute the questionnaires to the students. 390 sets of filled in questionnaire were collected back in usable form giving a response rate of 60%. The collected data were analyzed by Partial Least Squares Structural Equation Modeling (PLS-SEM) method with the support of smart **pls software version 2.0M3**.

4. Data Analysis Findings

In Partial Least Square Structural Equation Modeling (PLS-SEM) analysis, in the first step, the data reliability and validity are established by the PLS measurement model that provides the Cronbach alpha values, items loading, cross loadings, AVE and path coefficient as well as the coefficient of determination. The PLS SEM measurement model findings are shown in table 4.1.

4.1 Reliability

The first step is to assess the reliability and validity of the constructs in the measurement model (outer model). Reliability refers to the internal consistency of data (Hair et al., 2014). Cronbach's alpha and Composite reliability values are used to assess reliability of constructs. For reliability, all constructs should have Cronbach alpha values above the threshold of 0.70 (Hair et al. 2012) and the composite reliability values of the all constructs should be greater than the threshold of 0.70 (Bagozzi & Yi, 1988).

Table: 4.1: PLS SEM measurement model output

Variable	Items	Loadings	Cronbach alpha	Composite Reliability	Average Variance Extracted (AVE)
Subjective Norm (S)	S1	0.760	0.827	0.873	0.536
	S2	0.734			
	S3	0.738			
	S4	0.731			
	S5	0.649			
	S6	0.775			
Perceived Usefulness (PU)	PU1	0.825	0.735	0.833	0.558
	PU2	0.699			
	PU3	0.642			
	PU4	0.807			
Attitude (A)	A1	0.780	0.786	0.852	0.538
	A2	0.801			
	A3	0.673			
	A4	0.645			
	A5	0.755			
Trust (T)	TR1	0.781	0.750	0.822	0.606
	TR2	0.763			
	TR3	0.792			
Technological Knowledge	TK1	0.711	0.788	0.844	0.598
	TK2	0.691			
	TK3	0.603			
	TK4	0.713			
Online Shopping Behavior (OSB)	OSB 1	0.732	0.825	0.869	0.540
	OSB2	0.616			
	OSB3	0.757			
	OSB4	0.791			
	OSB5	0.601			
	OSB6	0.707			
	OSB7	0.671			

As shown in table 4.1, all the Cronbach alpha and composite reliability values are above 0.70 which indicates good internal consistency of data (Hair et al.,2012) and the reliability of all constructs is established in this study.

4.2 Convergent Validity

As shown in table 4.1, all the values of AVEs are above 0.50 which confirms the convergent validity of constructs. The absolute standardized outer loadings of items are above 0.50. Chin (1998) believes that loadings over 0.5 still be acceptable if there exist other indicators in the block for comparison. It is clear from table 4.1 that all the item loadings are greater than 0.50 which establishes convergent validity at indicator level. Therefore, 0.50 and above AVE values of all the constructs and 0.50 and above values of item loading confirm the convergent validity of constructs in this study.

4.3 Discriminant Validity

The square root of the AVE of each construct was compared with the correlation between that construct and the other constructs. As shown in table 4.2, the square root of the AVEs exceeds the highest correlation between that construct and the other constructs, providing another support of discriminant validity (Chin 1998; Fornell & Larcker, 1981) of the constructs in this study.

Table 4.2: Correlations of Constructs and Discriminant Validity Assessment

		U			K	SB
	.816					
U	.581	.810				
	.622	.608	.850			
	.535	.693	.680	.779		
K	.495	.635	.705	.589	.849	
SB	.556	.601	.621	.588	.630	.845

*Square root of the AVE on the diagonal.

4.4 Coefficient of Determination (R²)

The coefficient of determination (R²) value indicates how much the independent variables can influence the dependent variable. In this study, the R² value is 0.527 which indicates that the dependent variable is influenced by the independent variables by 52.70%. So, the five independent variables namely, convenience attitude, trust, subjective norm, perceived usefulness and technological knowledge considered in this study can explain the online shopping behavior by 52.7%.

4.5 Structural Model Assessment for Hypotheses Testing

Having assessed the measurement model for reliability and validity, the next step is the hypotheses testing through the findings of the structural model. The hypotheses testing findings generated from the PLS structural model are documented in table 4.3. A hypothesis can be accepted if it is significant at 5% (p<0.05) level or if the t statistics is higher than 1.96 (Hair et al., 2014).

Table 4.3: Structural Model output for hypotheses testing

Hypothesis	Path Coefficient	Standard Error	T-Value	P-Value
A->OSB(H1)	0.339	0.106	3.889	0.000
SN ->OSB(H2)	0.201	0.061	3.032	0.000
PU->OSB (H3)	0.145	0.084	1.991	0.046
T ->OSB(H4)	0.239	0.386	3.574	0.000
TK ->OSB(H5)	0.198	0.321	2.49	0.022

Hypothesis 1 which posits that attitude is positively and significantly correlated with online shopping behavior. The table 4.3 shows the path coefficient of this variable is 0.339 and it is significant at 1 % level (p<0.01). Thus, there exists a positive relationship between attitude and online shopping behavior. So, Hypothesis 1 is supported. It is seen from the table 4.3 above that the path coefficient of subjective norm with online shopping behavior is positive with a value of 0.201 and it is significant at 1% level (p<0.01). Since, subjective norm is found to be strongly and positively correlated with online shopping behavior, hypothesis 2 is supported. Hypothesis 3 states that perceived usefulness is positively and significantly related to online shopping behavior. Based on the path coefficient value in Table 4.3, it is clear that perceived usefulness positively and significantly influences the online shopping behavior (P<0.05) which supports hypothesis 3. Again, table 4.3

shows that the path coefficient value for trust is 0.239 which is significant at 1% level. This result shows that there is positive relationship between trust and online shopping behavior. Thus hypothesis 4 is supported. Finally, the hypothesis test findings reveal that technological knowledge is positively and significantly associated (path coefficient, 0.198; $p < 0.05$) with online shopping behavior. Hence hypothesis 5 is supported.

4.6 Mediation analysis

Mediation is the process in which a variable or variables influence other variables through intervening or mediating variables (Preacher & Hayes, 2004). The Sobel test and bootstrapping are both recommended approaches for determining the strength and significance of the mediation (Preacher & Hayes, 2004). In this study, the mediation effect was examined using the Sobel test. The Sobel test uses the path coefficient and standard error of the two paths: Independent variable \rightarrow Mediator and Mediator \rightarrow Dependent Variable (Hair et al., 2014). There is mediation if the indirect effect is significant at 5% level (Hair et al., 2014). The present study was designed to test the mediating effect of technological knowledge in the relation between the determining factors (convenient attitude, subjective norm, perceived usefulness and trust) and online shopping behavior. Table 4.4 shows the findings of mediating effect test. Table 4.4 shows that the direct effect of attitude on online shopping behavior is 0.339 while the indirect effect is 0.204. On the other hand, the indirect effect is significant at 5% level ($P, 0.020$; $t, 2.879$). Therefore, technological knowledge mediates the relationship between attitude and online shopping behavior. It is a partial mediation because attitude significantly influences online shopping behavior. So, hypothesis 6 is supported.

Table 4.4: Mediating effect test findings

Hypothesized path	Direct relationship	Indirect relationship	T value	P value	Mediation
A->TK->OSB	0.339	0.204	2.879	0.020	Partial mediation
SN ->TK->OSB	0.201	0.182	1.472	0.150	No mediation
PU->TK->OSB	0.145	0.141	2.003	0.048	Partial mediation
T ->TK->OSB	0.239	0.199	1.398	0.141	No mediation

Again, the direct effect of subjective norm on online shopping behavior is 0.201 while the indirect effect is 0.182. Here the indirect effect is not significant at 5% level ($P, 0.150$; $t, 1.472$). Therefore, hypothesis 5 is not supported and technical knowledge doesn't have any mediating effect on the relationship between subjective norm and online shopping behavior. The direct effect of perceived usefulness on online shopping behavior is 0.145 while the indirect effect is 0.141. Here the indirect effect is significant at 5% level ($P, 0.048$; $t, 2.003$). Therefore, hypothesis 6 is supported and technical knowledge has mediating effect on the relationship between perceived usefulness and online shopping behavior. It is a partial mediation because perceived usefulness significantly influences online shopping behavior. There is no mediation effect of technical knowledge on the relationship between trust and online shopping behavior because the indirect effect is not significant at 5% level. Hence hypothesis 7 is not supported.

5. Discussion

The present study was designed to examine the influence of convenience attitude, subjective norm, perceived usefulness and trust on online shopping behavior among the university students. The data analysis findings revealed that convenience attitude was the most significant followed by trust, subjective norm, technological knowledge and perceived usefulness in influencing online shopping behavior. Therefore, online platform should concentrate on those issues properly so that they can penetrate the market soon. Convenience attitude is a vital factor for choosing online shopping platform. The present study's findings also supported that convenience attitude is an essential determinant of online shopping behavior. This finding is consistent with those of Diallo et

al., (2013), Husin & Rahman, (2013), Li, Robson & Coates, (2013) who also found in their studies that attitude is a significant predictor of human behavior. Hence, online stores should focus more on developing positive attitude toward online shopping. To develop positive attitude, online retailers should focus on all indicators in the attitude construct simultaneously by stressing that purchasing online is better than traditional store. The present study also revealed that subjective norm is a significant factor influencing online shopping behavior and this finding is similar with those of Husin & Rahman, (2013), David, Tong, Yin, (2012). Hence the reference group can play a significant role in influencing online shopping behavior. Perceived usefulness of the website is an important issue for the online shoppers and the present study's findings also supported this. Previous studies (Hernandez et al., 2011; Ndubisi & Jantan, 2003) also supported that perceived usefulness is an important predictor of online shopping behavior. It is because of the fact that consumers always expect easy and fast access to the website for getting information about the products and making transactions. Therefore, online stores should provide various information and high-quality goods descriptions in the website so that customers can easily choose products and make payment. Trust was found to be significant factor influencing online shopping behavior.

The result is consistent with that of Kim & Song (2010) who suggested that trust might lead to actual online shopping behavior. Thus, building trust is an important issue for the online stores. Technological knowledge was also found to be significant determinant of the online shopping behavior. Therefore, this study's findings support Dwivedi et al., (2007) who also found that perceived technological knowledge is a significant factor for explaining consumers' intention to adopt new technology. Again, the mediating effect test findings indicate that technological knowledge mediates the relationship between attitude and online shopping behavior; and the relationship between perceived usefulness and online shopping behavior. Hence technological knowledge is essential for making online purchase. It is because of the fact that people might want to shop online; however, they cannot shop online if they don't have the technical knowledge to operate the technology. With technical knowledge, consumers are more connected, their expectations become high and more sophisticated tools are being used for getting the needs satisfied (Jose, 2017). Thus, technological knowledge is a vital issue for availing the benefits of online shopping.

6. Implications and Conclusions

The findings of this study bear deep significance both in theoretical and practical aspects. The most significant theoretical contribution of this research is the modification of the Theory of Planned Behavior Model (TPB). The current research examined that the new theoretical model consisted of Convenience attitude, subjective norm, perceived usefulness of website, technical knowledge and trust explained online shopping behavior quite well. The modified TPB is not new to marketing researchers however the findings provided different perspective especially in the comprehensive online shopping context among the university students in Bangladesh. This model was examined through a robust methodological procedure by using Partial Least Square Structural Equation Modeling (PLS-SEM) and validated across online shopping context. The findings generated from using PLS SEM technique revealed possible drivers of online shopping in the emerging business environment. The present study's findings suggested that online shopping behavior can be driven by convenience attitude, subjective norm, perceived usefulness of website, trust and technical knowledge. Thus, this study provided a robust understanding of online shopping behavior in a developing nation perspective which has extended the existing body of knowledge in the field of online shopping behavior.

From a practical perspective, there are several important implications which can be derived from the findings of this research. Through the findings of this study managers can know the consumers' insights regarding online shopping behavior from the specific culture of a developing country. This knowledge will help them design effective strategies for expanding their business in developing economies. The findings of this study suggest that online stores should focus on

convenience attitude since this variable was found to be important for the customers while shopping online. To develop positive attitude, online retailers should focus on all indicators in the attitude construct simultaneously by stressing that purchase online is better than traditional store. In order to satisfy consumers and stimulate actual online purchases, online retailers should provide impressive experience in online shopping. Delivering a high quality and favorable products and services throughout the online shopping experience might be important as competitive positioning strategies for online stores are essential. This provides immediate insight for online retailers that convenience attitude is an important step in the development of online shopping behavior. In order to maintain good perception toward online shopping, online retailers should provide variety of products choice, tailored services, easy product comparison and convenient payment process, on time delivery, prompt reply to customers' complaint and 24 hours operation.

Online retailers should focus on developing positive attitude for both the new and existing customers, enhancing positive word-of-mouth towards the brand, store reputation, products and services provided, so that they can share with their family members, friends and also promote the products on internet. At the same time, online retailers should provide secure and safe online platform to develop confidence among online shoppers. Online stores should build trust among customers so that they buy more and do positive word of mouth. Online stores should also concentrate on the usefulness of their website. Some customers complained that the products images are not always clear and sometimes mismatch with what is in web and the actual products. So, they should focus on investing more on quality image. Moreover, the statistical findings revealed that fast and clear website is an essential predictor of online shopping behavior. Finally, through this study it is now clear that technologically capable customers favor online shopping. Both the direct and mediating effect test findings reveal that technical knowledge is important for making online purchase. So online stores should think how they can make their existing and potential customers more technology friendly for increasing their sales. Though the study bears deep significance in different aspects, it has some shortcomings. The respondents were only the students while people working or in business might also buy products online. Hence the narrower sample segment limits the generalizability of the findings. Future researches may also be conducted taking samples from wide variety of people not only the students.

7. References

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