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Influence of COVID-19 Situation on Online Repurchase Intention and Attitude Toward Online Purchasing: Moderating Role of Socio-Demographic Characteristics

──────── **Abstract:** ────────

Motivation: The COVID pandemic has significantly increased online transactions. Numerous consumers have moved toward online ordering because of the risk of potential health hazards associated with the COVID pandemic**.** Rapid change also appeared in the e-commerce transaction volume and nature in developing countries due to the influence of the pandemic. **Research Question:** This study aims to investigate the impact of situational influence of the COVID pandemic on online repurchase intention and attitude toward online shopping. Moreover, the study has investigated the moderating influence of socio-demographic characteristics between the situational influence of the COVID pandemic and online repurchase intention. In addition, the moderating influence of socio-demographic characteristics has also been explored between attitude and repurchase intentions. The differential effect of gender on online repurchase intention has been examined. **Data:** Data have been collected from 721 consumers of e-commerce firms in Bangladesh. **Tools:** Cronbach Alpha values and factor loadings have been used to verify the measurement scales' reliability and validity. The common method bias problem has been checked through Harman's single-factor score method. The hypotheses of the study have been tested through multiple regression analysis, two independent sample t-tests, and the Hayes process macro method. **Findings:** The findings show that the COVID pandemic situation has a significant influence on online repurchase intention and attitude toward online shopping. Age level and Internet experience moderate the influence of the COVID pandemic situation on online repurchase intention.

Keywords: COVID-19, online repurchase intention, socio-demographic characteristics, attitude toward online shopping, consumer behaviour, regression analysis

JEL Classification: M30, M31, M39

1. Introduction

A loyal customer base is essential for the success of an online business (Chiu et al.,2009). The increase in online transactions has made it necessary to identify the antecedents of repurchase intentions of online customers (Wen et al., 2011). Careful investigation of e-commerce consumers' behaviour is useful in the efforts to survive in the competitive online business. Firms are trying to learn about the features of market offers that can enhance the repurchase intention of online customers (Chiu et al.,2009). Many studies have been conducted on different contexts to identify and analyse the factors that significantly influence repurchase intentions on online platforms, such as perceived ease of use, perceived usefulness, perceived

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enjoyment, trust, customer satisfaction, perceived value, etc. (Wen et al., 2011; Chiu et al., 2009; Lin & Lekhawipat, 2014; Pham et al., 2018).

The preventive measures of the COVID-19 pandemic have enhanced the difficulties of traditional face- to - face transactions and accelerated digital commerce. Hence, the significance of digital media for society and economy has enhanced more than ever before (Dannenberg et al., 2020). Since the pandemic, over 40% individuals from low and middle-income countries (apart from China) have made transactions through card, phone, or Internet for the first time (World Bank Group, 2022). The pandemic has enhanced the reach of e-commerce irrespective of national borders through the introduction of new business models, consumer groups, and products. In the past, consumers usually used online channels for ordering luxury products, but now numerous consumers prefer online channels for ordering necessary items (OECD, 2020).

According to the theory of planned behaviour (TPB), attitude has a greater impact on the development of behavioural intention (Ajzen, 1991). Additionally, previous research offers empirical support for the important role attitude plays in forming intention. In order to investigate the role of attitude toward online shopping as an antecedent of online repurchase intention, the current study has chosen to use TPB as its theoretical foundation.

The Stimulus-Organism-Response (S-O-R) Model suggests that external stimuli can impact internal psychological processes, resulting in a range of behavioural results (Mehrabian & Russell, 1974). The goal of this study is to investigate how the COVID-19 pandemic has affected attitudes and intentions to repurchase from e-commerce sites. The SOR theory was thus also used as the theoretical basis for the current investigation.

E-commerce businesses have significantly increased their total transactions and attracted numerous new customers during the COVID pandemic (Neger & Uddin, 2020). E-commerce platforms in Bangladesh recruited thousands of delivery personnel during the pandemic because a huge number of consumers were making online orders to remain safe from contagious virus (Haque, 2021). Academicians are focusing on the rising volume of e-commerce transactions during the pandemic situation in Bangladesh. Several studies have been conducted to detect the factors that may influence online shopping behaviour (Alam, 2020; Neger & Uddin, 2020; Chowdhury et al., 2022). Still, no research has examined the factors influencing repurchase intention of online purchasing in the context of Bangladesh. The repurchase behaviour is closely related to customer loyalty hence it is essential to identify the determinants of online repurchase intention to retain online customers for the longer term. Moreover, the e-commerce industry is accelerating at a great speed and COVID 19 has made online transactions almost mandatory for purchasing. Thus, it is essential to identify the factors that are significant to ensure the repurchase intention of customers in e-commerce platforms. Furthermore, there hasn't been much research done on buyer demographics in e-commerce settings (Bhat et al., 2021), which necessitates analyzing consumers' sociodemographic traits in e-shopping settings. In order to close this research gap, the current study attempts to address the following research questions.: Which factors influence the repurchase decision of online shoppers in Bangladesh? Did the situation of COVID-19 pandemic have an influence on online repurchase intention? Do the socio-demographic characteristics have any influence on online repurchase intention? Do socio-demographic characteristics moderate the influence of the COVID situation on repurchase intention? Does the situational influence of COVID-19 affect the attitude toward online shopping?

The paper is organized as follows: The study's conceptual framework and hypotheses have been presented along with a review of pertinent literature. The findings and discussion section were then provided. Implications for academics and practitioners have been created based on the study's findings. Finally, the study's shortcomings and potential directions for further research have been described.

2. Literature Review

2.1 Repurchase intention

A customer's decision to make another purchase in the future as a result of satisfaction and trust is known as repurchase intention and this repurchase decision can bring profits to the company (Febrini et al., 2019). Schiffman and Kanuk (2010) argue that repurchasing occurs when consumers have a satisfying experience from the use of the product. Repurchase intention refers to making purchasing decisions by consumers after purchasing the same products needed by these consumers (Anoraga, 2011). According to Korir et al. (2012), deciding whether to repurchase anything is a difficult and subjective procedure. Many factors

influence the repurchase intention process and the level of influence of those factors is very difficult to determine at a specific time. Razi and Lajevardi (2016) state that repurchase is a primary positive response from the customer after a satisfying experience and it must involve other positive behaviour such as recommendation to others.

2.2 Online repurchase intention

Online repurchase intention refers to the potential to make repeated purchases from the same online vendor (Chiu et al., 2014). Concurrent online and offline experiences can boost positive word-of-mouth recommendations and repurchase intention (Nguyen et al., 2024). Chiu et al. (2009) stated that the success of online businesses largely depends on the repurchase intention. The notion of online repurchase intention is grounded in IT and marketing. The consumer is not only visiting an e-commerce site repeatedly but also he/she is making a purchase decision (Wen et al., 2011). Bain & Company and Mainspring (2000) showed that an online firm must sell its product to a particular customer at least four times to make profit from that customer. Online repurchase with a favorable attitude indicates loyalty of the shoppers to the firm which is termed as 'E-loyalty' (Safa, 2014).

2.3 Theory of Planned Behaviour (TPB) and Stimulus-Organism-Response (S-O-R) theory:

According to TPB, attitude, subjective norms, and perceived behavioural control can form behavioural intention (Ajzen, 1991). In a study based on TPB, Kashyap and Kumar (2024) demonstrate how health awareness and COVID-19 protocols can influence attitudes toward online shopping, which in turn can influence purchase intentions. In another TPB based study, Zhang et al. (2024) state that attitude, subjective norms, and perceived behavioural control can boost shopping intention on social commerce platforms. In the present study, TPB encapsulates the pathway of the influence of attitude toward online shopping on repurchase intention. Additionally, Conner and Armitage (1998) suggested that TPB model can be expanded by adding factors that are relevant to the research context. Thus, age level, education, and Internet experience, which are pertinent to the current study have been amalgamated in the conceptual model.

The study of consumer behaviour makes extensive use of the S-O-R theory. This theory suggests that consumers' cognitive and emotional reactions might be generated through the interplay between internal psychological mechanisms and external stimuli (Mehrabian & Russell, 1974; Teangsompong & Sawangproh, 2024). Many studies in marketing literature have utilized the S-O-R theory to unveil the interrelationships of consumers' responses with other relevant determinants. Moreover, researchers investigated online consumer behaviour and consumers' reactions to many features of online firms in the framework of the S-O-R theory (Zhu et al., 2020). Utilizing the framework of S-O-R theory, Li et al. (2021) examined the role of environmental stimuli in predicting panic buying during the COVID pandemic. The current study also adopted the S-O-R mechanism to capture the influence of situational influence during the COVID pandemic on repurchase intention.

2.4 Situational influence of COVID-19 on Online repurchase intention and Attitude toward online shopping

The pandemic has made a strong impact on the lives of people all over the world because people have become too much worried regarding the infection of the COVID-19 virus and did their best to avoid face-to-face contact (Lin, 2020). According to Yang et al. (2024), the COVID-19 pandemic caused a quick shift in the economy and society, and consumers prioritized online shopping in order to avoid in-person interactions and to preserve social distance. Wei et al. (2024) demonstrate how the pandemic issue affects Chinese citizens' Internet shopping habits. During the COVID pandemic, the gap between core urban and suburban consumers' online purchases narrowed.

Brewer and Sebby (2021) argued that the perceived risk of COVID-19 had influence on online food ordering. Nguyen et al.. (2020) demonstrated that the situation developed through COVID-19 pandemic had a significant positive impact on intention toward online book shopping. The closing of offline bookstores, perceived health risks of visiting offline stores, online shopping trends, and extra marketing efforts of online bookstores during COVID-19 pandemic have been identified as situational influences of the pandemic by Nguyen et al.(2020).

Alam (2020) showed that online purchasing behaviour has been significantly influenced by health, price, product, and price-related aspects during the pandemic period in Bangladesh. Showrav et al.. (2021) stated that transactions in offline shopping have significantly declined due to restrictions on movement and lockdowns; therefore, a massive change has happened in purchasing behaviour of consumers due to the influence of COVID-19. Moreover, they demonstrated that benefits of online shopping have significant influence on the acceptance of online purchasing in Dhaka city.

The above discussions show that the situational influence of COVID-19 has rapidly enhanced the acceptance of online shopping. Consumers have chosen online shopping due to the limitations of physical transactions that appeared during the pandemic. Additionally, due to the effect of pandemic, numerous consumers have moved toward online shopping for the first time. The change in purchasing behaviour may encourage them to stick with online purchasing and may affect their attitude toward online purchasing. Therefore, we can propose the following hypotheses:

H1: The situational influence of COVID-19 pandemic may influence the online repurchase intention of consumers.

H2: The situational influence of COVID-19 pandemic may influence attitudes toward online purchasing.

2.5 Influence of consumer characteristics on attitude toward online shopping and online repurchase intention

Previous studies show that consumer characteristics have significant influence on online purchasing behaviour (Jin, 2018; Dominici et al., 2021). Girard (2003) demonstrated that shopping orientations, such as convenience and recreation, and socio-demographic characteristics, such as gender, education, and household income, have a significant relationship with online purchasing.

Dominici et al. (2021) argued that young, educated, female, satisfactory economic situation, and small family are common characteristics of consumers who order food through online channels. Well-educated consumers are less concerned about safety and perceive cost savings in online shopping. However, women express a high dissatisfaction of not being able to enjoy a satisfying physical shopping experience when they shop online (Hui & Wan, 2007). Usually, males have a more positive attitude and experience toward computers and online shopping (Lin et al., 2019; Wu, 2003). However, Ladhari and Leclerc (2013) showed that women report higher levels of satisfaction, trust, and loyalty than men in online shopping.

Based on the above-mentioned discussions, we can conceptualize that socio-demographic characteristics of the respondents have influence on online purchasing attitude and loyalty. Moreover, there is a strong possibility that there is a significant difference among the consumers based on gender on online repurchase intention during the pandemic. Therefore, we can propose the following hypotheses:

H3: Age level, education level, and Internet experience have influence on online repurchase intention during the COVID-19 pandemic.

H4: Age level, education level, and Internet experience have influence on attitude toward online purchasing during the COVID-19 pandemic.

H5: There is a significant difference in online repurchase intention in terms of gender.

2.6 Attitude toward online shopping and online repurchase intention

Attitude toward online purchasing is the positive or negative evaluation of buying behaviour on the Internet (Chiu et al., 2005). Attitude toward online shopping can make a significant effect on the intention to conduct e-commerce transactions (Michieal, 1998; Haque et al., 2006).

Loh and Hassan (2022) argued that attitude has a significant influence on the repurchase intention of food truck products. Yoopetch et al. (2024) found that attitude can make a direct influence on repurchase intention toward culturally designed clothing items. Asti et al. (2021) demonstrated that attitude toward online shopping has a significant influence on repurchase intention in case of e-grocery shopping. Amoroso and

Ackaradejruangsri (2017) found that consumer attitude is a significant determinant of repurchase intention of mobile wallet applications in Thailand. Hence, we can posit the following hypothesis:

H6: Attitude toward online shopping can influence online repurchase intention.

2.7 Moderating impact of consumer characteristics

Homburg and Giering (2001) showed that the satisfaction-loyalty relationship is significantly moderated by personal attributes of the consumer, such as age and income. Punj (2011) showed that income, education, Internet usage, and generational age have significant interaction effects during online purchase behaviour. Chang and Chen (2008) demonstrated that customer interface quality can positively impact switching costs when paired with a higher Internet experience. Bhat et al. (2021) discovered that consumers who are young, male, and single are more likely to make an online purchase. However, Cooil et al. (2007) showed that the majority of sociodemographic factors, with the exception of income, have no moderating effect on the relationship between changes in satisfaction and changes in share of wallet, a significant indicator of loyalty and intention to purchase.

The above discussions show that socio-demographic characteristics can make a moderating impact between situational influence of COVID-19 repurchase intention and attitude toward online shopping-online repurchase intention relationship. Therefore, the following hypotheses have been proposed:

H7: Age level, education level, and Internet experience level can influence the impact of situational influence of COVID-19 on online repurchase intention.

H8: Age level, education level, and Internet experience level can influence the impact of attitude toward online shopping during COVID-19 on online repurchase intention.

Based on the above-mentioned literature review and suggested interrelationships among the variables the following conceptual framework has been developed:
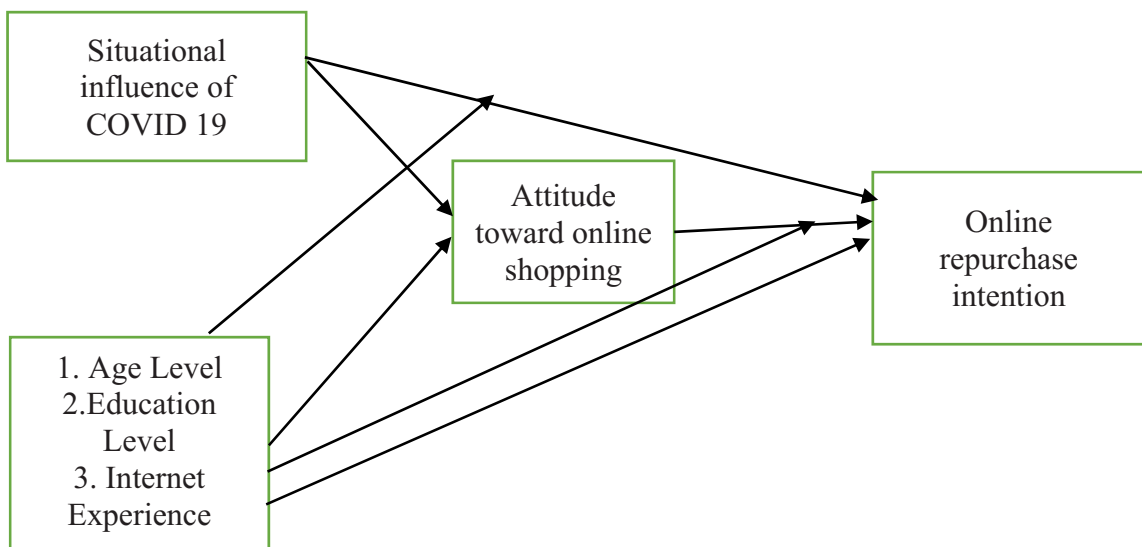

Figure 1: Conceptual Framework

3. Methodology and Research Methods

3.1 Survey

The study is empirical in nature. Data have been collected from customers of online business firms in Bangladesh. The authors have chosen well-known e-commerce firms of Bangladesh, such as Rokomari.com, Evaly.com, Chaldal.com, and Daraz.com, to conduct the study. The data collection has been carried out through purposive sampling by selecting the 721 respondents from different suitable clusters

covering diverse geographic areas of Bangladesh. Additionally, respondents have been chosen from different demographic groups. The researchers focused on the geographic and demographic diversity to uplift the representativeness of the study sample. The purposive sampling method has been selected to include shoppers who have required experience regarding online shopping. Consequently, every participant in the study who has responded must have made at least two purchases from a single e-commerce site while Bangladesh was experiencing the COVID-19 outbreak. The choice of purposive sampling ensured the inclusion of enough experienced online shoppers in the study. Data collection has been done through the distribution of structured questionnaires. The questionnaire has been designed to collect data on the socio-demographic traits of the respondents. Moreover, the questionnaire contains abundant items to measure the situational influence of COVID-19, attitude toward online shopping, and online repurchase intention.

3.2 Method of data analysis

The statistical package SPSS (version 23.0) has been utilized for data analysis. Cronbach's alpha values and factor loadings have been used to assess the validity and reliability of the questionnaire items. Regression analysis has been used to investigate the impact of situational influence of COVID-19, attitude toward online shopping, and socio-demographic characteristics on online repurchase intention during the pandemic period. Hayes process macro has been utilized to test the moderating impact of age, education level, and Internet experience on the impact of situational influence of COVID-19 on online repurchase intention and the impact of attitude toward online shopping on online repurchase intention.

3.3 Scale and measurement

The questionnaire started with items relevant to socio-demographic characteristics of the respondents such as age, gender, education level, Internet experience etc. The researchers have measured the situational influence of COVID-19, attitude toward online shopping, and online repurchase intention by utilizing five-point Likert scale (1 = strongly disagree and 5 = strongly agree). Questionnaire items from earlier studies have been adapted by the researchers to better fit the needs of this study. Measurement items of the variables under study are presented in Table 1:

Table 1: Measurement Items

Variable name	Measurement Items	Sources of measurement items
Situational influence of COVID 19	1. There are significant health risks associated with visiting physical stores/shops during the COVID-19 pandemic. 2. Online businesses offer more sales promotions during the COVID-19 pandemic. 3. Online purchasing is a trend during the COVID-19 pandemic.	Nguyen et al. (2020)
Attitude toward online shopping	1. Buying online is better than buying from a physical store/shop 2. The idea of buying online is a good idea 3. Buying online is a pleasant thing to do.	Chetioui et al. (2021)
Online Repurchase Intention	1. I intend to continue purchasing products from this online firm in the future. 2. Probably I will continue to purchase products from this online firm in the future. 3. I expect to repurchase products from this Internet store in the near future.	Chiu et al. (2009) Lin & Lekhawipat (2014)

4. Results

Table 2 depicts the socio-demographic characteristics of the respondents. 63.4% respondents included in the study are male and 36.6% are female. Most of the respondents come from the younger generation of the age ranging from 18 to 22 and 23 to 27 years. 42.2% respondents in the study are from 18 to 22 years of age and 35.2% are from 23 to 27 years of age. As most of the online shoppers are from the younger generation, the sample is well representative in that case. Most of the respondents of the study have completed their undergraduate (Honors) education. 56.3% of the total number of respondents have completed their undergraduate education and 16.1% have completed their master's degree. 33.4% of the total number of respondents have been using the Internet for 6 to 7 years and 23.9% have been using the Internet for 8 to 9 years. Most of the respondents (71.6%) in the study are unmarried.

Table 2: Participant's Characteristics

Variable	Category	Frequency	Percentage
Gender	Male	457	63.4
	Female	264	36.6
Age Group	18-22	304	42.2
	23-27	254	35.2
	28-32	94	13
	33-37	62	8.6
	More than 38	7	1
Level of Education	Below Honors	173	24
	Honors	406	56.3
	Masters	116	16.1
	Above masters	26	3.6
Internet experience	Below 5 years	181	25.1
	6 to 7 years	241	33.4
	8 to 9 years	172	23.9
	More than 9 years	127	17.6
Marital status	Married	205	28.4
	Unmarried	516	71.6

The reliabilities of the constructs have been calculated using Cronbach's alpha values. The reliability test showed that the overall Cronbach's alpha coefficients for situational influence of COVID 19, attitude toward online shopping, and online repurchase intention were within an acceptable range. Hair et al.. (2010) state that an alpha value of 0.70 or higher is considered a reasonable value and the alpha value of situational influence of COVID-19 is 0.632 which is also acceptable according to George and Mallery (2003) and Malhotra et al. (2017). The validity of the questionnaire items has been checked through factor loading. The KMO value was 0.814 which indicates that the data are suitable for factor analysis. The Bartlett's Test of Sphericity shows that approximate Chi-square value is 1867.071 (df=36) which is highly significant (P value=0.00). The loading of all the statements is satisfactory on the appropriate constructs. Hence, the measurement items of the questionnaire are valid.

Table 3: Reliability and Validity

Variable name	Measurement items	Cronbach's alpha	Factor loading
Situational influence of COVID 19	1. There are significant health risks associated with visiting physical stores/shops during the COVID-19 pandemic.	0.632	0.652
	2. Online businesses offer more sales promotions during the COVID-19 pandemic.		0.760
	3.Online purchasing is a trend during the COVID-19 pandemic.		0.823

Variable name	Measurement items	Cronbach's alpha	Factor loading
Attitude toward online shopping	1.Buying online is better than buying from a physical store/shop	0.723	0.756
	2. The idea of buying online is a good idea		0.746
	3.Buying online is a pleasant thing to do.		0.790
Online Repurchase Intention	1.I intend to continue purchasing products from this online firm in the future.	0.791	0.737
	2.Probably I will continue to purchase products from this online firm in the future.		0.762
	3. I expect to repurchase products from this Internet store in the near future.		0.790

The problem of common method bias has been investigated using Harman's single-factor test. This method loads all items (measuring latent variables) into one common factor in order to figure out whether or not a single factor's total variance exceeds 50%. If the total variance of a single exceeds 50% then there is a common method bias in the dataset. However, if the total variance is lower than 50% then the dataset is free from the common method bias problem and can be used for further analysis (Miguel et al., 2019).

Table 4 shows that the total variance explained by the single factor is 39.43% (Table 4). Hence, the dataset is free from the problem of common method bias and ready for further analysis.

Table 4: Harman's Single Factor Test

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.549	39.429	39.429	3.549	39.429	39.429
2	1.408	15.643	55.072			
3	.975	10.837	65.910			
4	.704	7.819	73.729			
5	.590	6.552	80.281			
6	.555	6.170	86.451			
7	.474	5.272	91.723			
8	.390	4.333	96.056			
9	.355	3.944	100.000			
Extraction Method: Principal Component Analysis.						

Table 5 shows the Pearson correlations among the variables of the study. The correlation table shows that age, education level, Internet experience, online repurchase intention, and situational influence of COVID 19 are significantly correlated with the attitude toward online shopping. Online repurchase intention is not significantly correlated with the age and education level of the consumers. The table also shows that the situational influence of COVID-19 is negatively correlated with the age level of the respondents.

Higher correlation coefficients between the variables of the study indicate the existence of a collinearity issue. When the absolute value of the Pearson correlation coefficient is close to 0.8 then collinearity is likely to exist (Belinda & Peat, 2014). Table 5 shows that the correlation coefficients of the variables are much below 0.8. Hence, there is no multi-collinearity problem among the variables of the study.

Table 5: Correlation Matrix

	Attitude	Online Repurchase Intention	Situational Influence of COVID 19
1. **Attitude**	1		
2. **Online Repurchase Intention**	.510**	1	
3. **Situational Influence of COVID-19**	.239**	.429**	1

Note: Correlation is significant at 0.01 level (two-tailed)

Table 6 exhibits the R square value of 0.369, meaning that the independent variables of the model can account for approximately 37% of the variation in online repurchase intention. The F value of the regression model is significant at the 0.05 level. The value of Durbin-Watson statistic is 1.910 which indicates that autocorrelation problem is not present (Asif & Mamoon, 2018). Regression coefficients show that the Internet experience, attitude toward online shopping, and situational influence of COVID-19 have a significant influence on online repurchase intention during the period of COVID pandemic. However, the influence of age level and education level has not been found significant.

Table 6: Regression coefficients of Online Repurchase Intention

R Square	Adjusted R Square	F value	Sig. Level	Durbin-Watson	Independent variables	Standardized Coefficients	Significance
0.369	0.364	83.571	0.00	1.910	Age level	-0.018	0.604
					Education level	-0.028	0.389
					Internet experience	0.104	0.001
					Situational Influence of COVID	0.295	0.00
					Attitude toward online shopping	0.434	0.00

Table 7 shows that R square value is 0.117 which indicates around 12% variation in the attitude toward online shopping can be explained by the independent variables of the model. The F value of the regression model is significant at the 0.05 level. The value of Durbin-Watson statistics is 1.798 which indicates that no autocorrelation problem is present (Asif & Mamoon, 2018). Regression coefficients show that age level and situational influence of COVID-19 have a significant influence on the attitude toward online shopping during the period of the COVID pandemic. However, the influence of education level and Internet experience has not been found significant.

Table 7: Regression coefficients of Attitude toward Online Shopping

R Square	Adjusted R Square	F value	Sig. Level	Durbin-Watson	Independent variables	Standardized Coefficients	Significance
0.117	0.112	23.784	0.00	1.798	Age level	0.257	0.000
					Education level	-0.017	0.654
					Internet experience	0.015	0.692
					Situational Influence of COVID	0.275	0.00

Table 8 shows that age level positively moderates the impact of situational influence of COVID-19 on online repurchase intention. Therefore, the increase in age level of the consumers enhances the positive influence of the COVID-19 pandemic on online repurchase intention.

The table demonstrates that Internet experience negatively moderates the impact of situational influence of COVID-19 on online repurchase intention. Therefore, the higher level of Internet experience reduces the effect of situational influence of the COVID pandemic on online repurchase intention.

Table 8: Moderating effect of Age level, Education level, and Internet experience between COVID-19 situational influence and online repurchase intention

Interaction Variable	Coefficients	SE	t	P
COVID-19 Situational influence X Age level	0.0837	0.0341	2.45	0.0145
COVID-19 Situational influence X Education level	-0.0071	0.0444	-0.1594	0.8734
COVID-19 Situational influence X Internet experience	**-0.0781**	**0.0375**	**-2.0802**	**0.0379**

Table 9 shows that age level, education level, and Internet experience have no significant moderating impact between attitude toward online shopping and online repurchase intention.

Table 9: Moderating effect of Age level, Education level, and Internet experience between Attitude toward online shopping and online repurchase intention during COVID pandemic

Interaction Variable	Coefficients	SE	t	P
Attitude toward online shopping X Age level	0.024	0.0306	0.7823	0.4343
Attitude toward online shopping X Education level	0.0003	0.0411	0.0084	0.9933
Attitude toward online shopping X Internet experience	0.0526	0.0309	1.7029	0.089

Table 10 demonstrates the result of an independent sample t test that examine the difference between males and females in terms of online repurchase intention during COVID 19 pandemic. Levene's test for equality of variances exhibits that F value is significant (F=3.013, P=0.083); hence, the first row has been considered for interpretation. The results show that there is a significant difference between maless and female in online repurchase intention. The mean value of the female group is 3.71 which is higher than the mean value of the male group which is 3.54. Therefore, the online repurchase intention in female consumers is higher than in the male consumers.

Table 10: Gender and Online Repurchase Intention (Summarized Result of Independent sample T test)

Gender	N	Mean	Std. Deviation	Std. Error Mean	T value	Significance
Male	457	3.5405	.83996	.03929	-2.678	0.008
Female	264	3.7121	.80950	.04982		

Discussion and Conclusions

The study aims to investigate the influence of COVID 19 pandemic situation and consumer characteristics on the attitude toward online shopping and online repurchase intention during COVID pandemic period in the context of Bangladesh. Moreover, the study has examined the moderating role of age, education, and Internet experience between the relationship of situational influence of COVID-19 and online repurchase intention and attitude toward online shopping and online repurchase intention.

The results of the study demonstrate that the situational influence of COVID-19 has a significant influence on online repurchase intention and attitude toward online shopping. Therefore, H1 and H2 are accepted. Prior studies show that the influence of the COVID pandemic is significant for online purchasing in different contexts (Lin, 2020; Brewer and Sebby, 2021; Nguyen et al.,2020; Alam, 2020). The current study shows that the COVID pandemic has a significant effect on online repurchase intention which is a unique finding of the study. The consumers may want to avoid negative health

consequences of the pandemic and want to follow the directions of administrators who prohibited or discouraged face-to-face interactions during the pandemic period by ordering online. Consequently, the SOR theory, which posits that external stimuli can predict psychological mechanisms of consumers, has been supported through the study.

There may be a habitual change in the purchasing pattern of consumers due to the influence of the pandemic, and such a change may persist in the future.

Internet experience has a significant influence on online repurchase intention during the period of the pandemic. Many consumers who have experience with the Internet may order easily for their necessities from the beginning. This finding is also supported by habituation theory. Repeated experience with the Internet has reduced the level of influence of crisis situations like a pandemic on the pathway of the attitude to online repurchase intention.

The study demonstrated that age level and education level have no significant impact on online repurchase intention. Thaichon et al. (2016) presented that attitudinal and behavioural loyalty, which are closely associated conceptually with repurchase intention, are related to the age level of consumers. Conversely, Gupta and Chandan (2020) found that age level has no significant impact on the repurchase intention of consumers. Additionally, Manyanga et al. (2022) revealed that the level of education cannot enhance the influence of satisfaction on the loyalty of consumers. Therefore, the influence of age and education levels in the context of repurchase intention has mixed findings in past studies. However, the age level has significant influence on the attitude toward online shopping which is supported by prior works (Asti et al., 2021; Amoroso and Ackaradejruangsri, 2017). Alfanur and Kadono (2022) also found that differences in the age level can stimulate a differential impact on the attitude toward online shopping. Moreover, the TPB theory (Ajzen,1991), which included attitude as a key construct has been extended through the study. The study findings indicated that extending the TPB model with the amalgamation of socio-demographic characteristics and external crisis situation can provide robust outcomes.

The independent sample t-test has provided interesting findings for the study that show that there is a significant difference in online repurchase intention between males and females; hence, hypothesis 5 is accepted. Several previous studies show that female consumers have a more positive attitude toward online shopping and purchase more over the Internet (Ladhari and Leclerc, 2013; Dominici et al.,2021). The current study shows that the mean value of online repurchase intention is higher in case of females than of males. Females are becoming more experienced with Internet usage especially through smartphones. Therefore, females can search and evaluate shopping items easily. The pandemic situation also drives female consumers to focus more on Internet shopping. The emergence of many female entrepreneurs in online business may be another strong predictor of such a situation.

The moderating impact of age level, education level, and Internet experience between COVID-19 situational influence and online repurchase intention provides important findings. The age level positively moderates the impact of the COVID-19 situation on online repurchase intention. Therefore, with the rise in age level, there is a significant positive influence of the COVID pandemic on online repurchase intention. Natarajan et al. (2018) found that older people are more likely to adopt shopping apps and perceive those apps as more useful than those of younger people. Kautish et al. (2022) also underscored the significance of the moderating role of age between consumers' values and intention. The aging population is at high risk due to the pandemic; hence, there is a strong possibility that aging people have become interested in choosing the best alternative method in such a situation, which is online purchasing of their necessary products. The Internet experience negatively moderates the influence of the COVID pandemic on online repurchase intention. People with high Internet experience usually have greater experience with online purchasing than people who have limited Internet experience. The limited Internet experience customers provide more focus on repurchase intention due to the influence of the pandemic. The habituation theory states that repeated exposure to any particular stimulus might decrease the behavioural reaction toward such stimuli (Thompson & Spencer, 1966; Rankin et al., 2009). Consequently, highly experienced Internet users who are habituated toward online shopping might not be affected so much in their online shopping behaviour due to the crisis that emerged due to the COVID pandemic. On the other hand, consumers with limited Internet experience were not as habituated to online buying, but the introduction of potential serious health risks changed their purchasing habits and encouraged them to shop online.

The attitude toward online shopping has a significant positive impact on online repurchase intention during the COVID pandemic. This finding supported the TPB model (Ajzen, 1991), which indicated attitude as a crucial determinant of the behavioural intention of individuals.

Implications

The study has important theoretical and practical implications for academicians and managers. The study has investigated the situational influence of the COVID pandemic on online repurchase intention. Previous studies have mostly dealt with online shopping and online buying behaviour. It is essential to investigate the influence of the pandemic on repurchase intention, which is an important determinant of loyalty, to identify the long-run change in the behaviour of customers. The study found support for the influence of COVID-19 on online repurchase intention which supported the mechanisms of the

S-O-R model. The study also investigated the moderating impact of consumer characteristics between the situational influence of COVID-19 and online repurchase intention and found age level and Internet experience as significant moderators. Prior studies tested the moderating impact of socio-demographic characteristics between satisfaction-loyalty relationship (Cooil et al., 2007; Homburg and Giering , 2001). The current study has tested the moderating impact of socio-demographic characteristics between the situational influence of COVID and the online repurchase intention and fill the vacuum. The current study also tested the relationship between the attitude toward online shopping and online repurchase intention and found support for the prior studies (Asti et al., 2021; Amoroso and Ackaradejruangsri, 2017). Moreover, this finding supported the interrelationships of the TPB constructs as proposed by Ajzen (1991).

The impact of the COVID pandemic has developed crucial changes in online shopping behaviour. E-commerce firms should develop digital infrastructures to serve the customer groups who have become habituated with online shopping due to the pandemic. E-commerce firms should attempt to implement Omni-channel retailing system to serve both offline and online transactions. The study implies that online marketers should properly segment and target their markets based on consumer characteristics. They should develop proper market offers for appropriate age segments in the market to ensure repurchasing for the firm. The online marketers should analyze the situation properly to reap the benefits of the situation. The change in purchasing behaviour of consumers because of the COVID situation should be properly examined to take appropriate measures. The consumers who have a low level of Internet experience should be targeted to ensure repurchase intention for the firm.

Limitations and future research directions

The study provides important findings and implications but has limitations. First, the study has been carried out in Bangladesh and the findings cannot be generalized for other parts of the world. Second, Actual online purchasing data and online shopping behaviour have not been analyzed; rather the scales have generated self-reported perception data. Third, the sample has been chosen through non- probability techniques. Fourth, several socio-demographic variables have not been investigated in the study, i.e., income, residential information, marital status etc. Fifth, experimental research can be conducted to find more accurate findings.

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REFERENCES

[1] Ajzen, I. (1991). The theory of planned behaviour. Organizational Behaviour and Human Decision Processes, *50*(2), 179–211. DOI: 10.1016/0749-5978(91)90020-T

[2] Alam, J. (2020). Buying behaviour under coronavirus disease (COVID-19) pandemic situation: a online perspective case in Bangladeshi shoppers. *Chinese Business Review, 19*(3), 82-90. DOI: 10.17265/1537-1506/2020.03.002

[3] Alfanur, F., & Kadono, Y. (2022). The effects of gender and age on factors that influence purchase intentions and behaviours of e-commerce consumers in Indonesia. *International Journal of Innovation and Learning*, *31*(4), 474-505. DOI: 10.1504/IJIL.2022.123178

[4] Amoroso, D., & Ackaradejruangsri, P. (2017). How consumer attitudes improve repurchase intention. *International Journal of E-Services and Mobile Applications (IJESMA), 9*(3), 38-61. DOI: 10.4018/IJESMA.2017070103

[5] Anoraga, P. (2011). Manajemen Bisnis. Jakarta: Rineka Cipta. Atmodiwirio, Soebagio, 2005. Manajemen Pendidikan Indonesia. Jakarta: Ardadizya Jaya.

[6] Asif, R., & Mamoon, D. (2018). Does new public management practices lead to effective public welfare responses in Pakistan. *Turkish Economic Review*, *5*(2), 150-173.

[7] Asti, W. P., Handayani, P. W., & Azzahro, F. (2021). Influence of trust, perceived value, and attitude on customers' repurchase intention for e-grocery. *Journal of Food Products Marketing, 27*(3), 157-171. DOI: 10.1080/10454446.2021.1922325

[8] Bain & Company, Inc., & Mainspring. (2000). *The value of online customer loyalty and how you can capture it* [Strategy brief]. Bain & Company. Retrieved from https://www.bain.com/contentassets/1fc37cf1a6a14ad0979da0e0e0aed05b/value_online_customer_loyalty_you_capture.pdf

[9] Belinda, B., & Peat, J., Medical statistics: a guide to SPSS, data analysis, and critical appraisal (2nd edition), Wiley, UK, 2014.

[10] Brewer, P., & Sebby, A. G. (2021). The effect of online restaurant menus on consumers' purchase intentions during the COVID-19 pandemic. *International Journal of Hospitality Management, 94*,102777. DOI: 10.1016/j.ijhm.2020.102777

[11] Bhat, S. A., Islam, S. B., & Sheikh, A. H. (2021). Evaluating the influence of consumer demographics on online purchase intention: An E-Tail Perspective. *Paradigm*, *25*(2), 141-160.

[12] Chang, H. H., & Chen, S. W. (2008). The impact of customer interface quality, satisfaction and switching costs on e-loyalty: Internet experience as a moderator. *Computers in Human Behaviour, 24*(6), 2927-2944. DOI: 10.1016/j.chb.2008.04.014

[13] Chetioui, Y., Lebdaoui, H., & Chetioui, H. (2021). Factors influencing consumer attitudes toward online shopping: the mediating effect of trust. *EuroMed Journal of Business*, *16*(4), 544-563. DOI: 10.1108/EMJB-05-2020-0046

[14] Chiu Y., Lin C.,& Tang L. (2005). Gender differs: assessing a model of online purchase intentions in e-tail service. *International Journal of Service Industry Management. 16*(5), 416–435. DOI: 10.1108/09564230510625741

[15] Chiu, C., Chang, C., Cheng, H, & Fang, Y. (2009). Determinants of customer repurchase intention in online shopping. *Online information review*. *33*(4). DOI: 10.1108/14684520910985710

[16] Chiu, C., Wang, E.T, Fang, Y., & Huang, H. (2014), Understanding customers' repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk, *Information Systems Journal, 24*(1), 85-114. DOI: 10.1111/j.1365-2575.2012.00407.x

[17] Chowdhury, M. S. A., Islam, M. S., Haque, M. S., Chowdhury, M. S. R., & Hossain, M. E. (2022). CUSTOMER TRUST IN E-BANKING DURING COVID-19 PANDEMIC IN BANGLADESH. *Indian Journal of Finance and Banking, 10*(1), 45-53. DOI: 10.46281/ijfb.v10i1.1772

[18] Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behaviour: A review and avenues for further research. *Journal of applied social psychology, 28*(15), 1429-1464. DOI: 10.1111/j.1559-1816.1998.tb01685.x

[19] Cooil, B., Keiningham, T. L., Aksoy, L., & Hsu, M. (2007). A longitudinal analysis of customer satisfaction and share of wallet: Investigating the moderating effect of customer characteristics. *Journal of Marketing, 71*(1), 67-83. DOI: 10.1509/jmkg.71.1.067

[20] Dannenberg, P., Fuchs, M., Riedler, T., & Wiedemann, C. (2020). Digital transition by COVID-19 pandemic? The German food online retail. *Tijdschrift voor economische en sociale geografie*, *111*(3), 543-560.

[21] Dominici, A., Boncinelli, F., Gerini, F., & Marone, E. (2021). Determinants of online food purchasing: The impact of socio-socio-demographic and situational factors. *Journal of Retailing and Consumer Services, 60*, 102473. DOI: 10.1016/j.jretconser.2021.102473

[22] Febrini, I. Y., Widowati, R., & Anwar, M. (2019). Pengaruh experiential marketing terhadap kepuasan konsumen dan minat beli ulang di Warung Kopi Klotok, Kaliurang, *Yogyakarta. Jurnal Manajemen Bisnis, 10*(1), 35-54.

[23] George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston: Allyn & Bacon.

[24] Girard, T., Korgaonkar, P., & Silverblatt, R. (2003). Relationship of type of product, shopping orientations, and socio-demographic s with preference for shopping on the Internet. *Journal of Business and Psychology, 18*(1), 101-120. DOI: 10.1023/A:1025087021768.

[25] Gupta, N., & Chandan, C. L. (2020). Influence of demography on satisfaction, trust and repurchase intention in online shopping. *Abhigyan*, *38*(2), 41-49.

[26] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis: Pearson College Division.

[27] Haque, A., Sadeghzadeh, J., & Khatibi, A. (2006). Identifying potentiality online sales in Malaysia: A study on customer relationships online shopping. *Journal of Applied Business Research (JABR)*, *22*(4).

[28] Haque, S. (2021, April 27). Pandemic e-commerce boom adds jobs in Bangladesh. bdnews24.com. Retrieved from https://bdnews24.com/business/pandemic-e-commerce-boom-adds-jobs-in-bangladesh.

[29] Homburg, C., & Giering, A. (2001). Personal characteristics as moderators of the relationship between customer satisfaction and loyalty—an empirical analysis. *Psychology & Marketing, 18*(1), 43-66. DOI: 10.1002/1520-6793(200101)18:1<43::AID-MAR3>3.0.CO;2-I

[30] Hui, T., & Wan, D. (2007). Factors affecting Internet shopping behaviour in Singapore: gender and educational issues. *International journal of consumer studies, 31*(3), 310-316. DOI: 10.1111/j.1470-6431.2006.00554.x

[31] Jin, H. J. (2018). Demographic characteristics of consumers dichotomized by online use when purchasing food. *Korean Journal of Agricultural Management and Policy, 45*(4).

[32] Kashyap, A. K., & Kumar, A. (2024). Application of theory of planned behaviour in determining attitude and to measure purchase intention under the fear of COVID-19. *Cogent Business & Management, 11*(1), 2376108. DOI: 10.1080/23311975.2024.2376108

[33] Kautish, P., Hollebeek, L. D., Khare, A., & Rather, R. A. (2022). The effect of consumer values on engagement and behavioural intent: Moderating role of age. In *Managing disruptions in business: Causes, conflicts, and control* (pp. 263-289). Cham: Springer International Publishing. DOI: 10.1007/978-3-030-79709-6_14

[34] Korir, J., Korir, K., Musyoki, J., & Barno, W. (2012). Determinants of Consumer Purchase Decisions in Zero Rated Hotels in Eldoret Town, Kenya. *International Journal of Business and Social Science, 3*(21)

[35] Ladhari, R., & Leclerc, A. (2013). Building loyalty with online financial services customers: Is there a gender difference?. *Journal of Retailing and Consumer Services*, *20*(6), 560-569. DOI: 10.1016/j.jretconser.2013.07.005.

[36] Li, X., Zhou, Y., Wong, Y. D., Wang, X., & Yuen, K. F. (2021). What influences panic buying behaviour? A model based on dual-system theory and stimulus-organism-response framework. *International Journal of Disaster Risk Reduction*, *64*, 102484. DOI: 10.1016/j.ijdrr.2021.102484

[37] Lin, C. Y. (2020). Social reaction toward the 2019 novel coronavirus (COVID-19). *Social Health and Behaviour, 3*(1), 1.

[38] Lin, X., Featherman, M., Brooks, S. L., & Hajli, N. (2019). Exploring gender differences in online consumer purchase decision making: An online product presentation perspective. *Information Systems Frontiers*, *21*(5), 1187-1201. DOI: 10.1007/s10796-018-9831-1

[39] Lin, C., & Lekhawipat, W. (2014). Factors affecting online repurchase intention. *Industrial Management & Data Systems, 114*(4), 597-611. DOI: 10.1108/IMDS-10-2013-0432

[40] Loh, Z., & Hassan, S. H. (2022). Consumers' attitudes, perceived risks and perceived benefits towards repurchase intention of food truck products. *British Food Journal, 124*(4), 1314-1332. DOI: 10.1108/BFJ-03-2021-0216

[41] Malhotra, N.K., Nunan, D. and Birks, D.F., 2017. Marketing research (5th edition). Pearson UK

[42] Manyanga, W., Makanyeza, C., & Muranda, Z. (2022). The effect of customer experience, customer satisfaction and word of mouth intention on customer loyalty: The moderating role of consumer demographics. *Cogent Business & Management, 9*(1), 2082015. DOI: 10.1080/23311975.2022.2082015.

[43] Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. MIT Press.

[44] Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a World-Wide-Web context. *Information & management, 38*(4), 217-230. DOI: 10.1016/S0378-7206(00)00061-6

[45] Michieal KSd (1998). E-shock the electronic shopping revolution: Strategies for retailers and manufactures. London, Mac Millan Business.

[46] Natarajan, T., Balasubramanian, S. A., & Kasilingam, D. L. (2018). The moderating role of device type and age of users on the intention to use mobile shopping applications. *Technology in Society*, *53*, 79-90. DOI: 10.1016/j.techsoc.2018.01.003.

[47] Neger, M., & Uddin, B. (2020). Factors affecting consumers' Internet shopping behaviour during the COVID-19 pandemic: Evidence from Bangladesh. *Chinese Business Review, 19*(3), 91-104.

[48] Nguyen, N. Q., Nguyen, H. L., & Trinh, T. G. (2024). The impact of online and offline experiences on the repurchase intention and word of mouth of women's fashion products with the intermediate trust factor. *Cogent Business & Management*, *11*(1), 2322780. DOI: 10.1080/23311975.2024.2322780

[49] Nguyen, H. V., Tran, H. X., Van Huy, L., Nguyen, X. N., Do, M. T., & Nguyen, N. (2020). Online Book Shopping in Vietnam: The Impact of the COVID-19 Pandemic Situation. *Publishing Research Quarterly, 36*, 437-445.DOI: 10.1007/s12109-020-09732-2.

[50] Pham, Q. T., Tran, X. P., Misra, S., Maskeliunas, R., & Damasevicius, R. (2018). Relationship between convenience, perceived value, and repurchase intention in online shopping in Vietnam. *Sustainability*, *10*(1), 156. DOI: 10.3390/su10010156

[51] Punj, G. (2011). Effect of consumer beliefs on online purchase behaviour: The influence of socio-demographic characteristics and consumption values. *Journal of Interactive Marketing, 25*(3), 134-144. DOI: 10.1016/j.intmar.2011.04.004

[52] Rankin, C. H., Abrams, T., Barry, R. J., Bhatnagar, S., Clayton, D. F., Colombo, J., ... & Thompson, R. F. (2009). Habituation revisited: an updated and revised description of the behavioural characteristics of habituation. *Neurobiology of learning and memory*, *92*(2), 135-138. DOI: 10.1016/j.nlm.2008.09.012

[53] Razi, F. F., & Lajevardi, M. (2016). Sense marketing, experiential marketing, customer satisfaction, and repurchase intention. *Journal of Marketing and Consumer Research*, *21*(7), 67-73.

[54] Safa, N.S. (2014), "Modelling of multi-dimensional loyalty in electronic commerce", Doctoral dissertation, University Malaya.

[55] Schiffman, L.G., Kanuk,L.L.(2010).Consumer Behaviour.England: PrenticeHall.

[56] Showrav, D. G. Y., Hassan, M. A., Anam, S., & Chakrabarty, A. K. (2021). Factors influencing the rapid growth of online shopping during COVID-19 pandemic time in Dhaka City, Bangladesh. *Academy of Strategic Management Journal, 20*, 1-13.

[57] Teangsompong, T., & Sawangproh, W. (2024). Understanding online purchase intention of plant-based foods: Exploring causal factors and moderating role of self-efficacy within the SOR theory. *Heliyon*, *10*(10), e30785. DOI: 10.1016/j.heliyon.2024.e30785

[58] Thaichon, P., Lobo, A., & Quach, T. N. (2016). The moderating role of age in customer loyalty formation process. *Services Marketing Quarterly, 37*(1), 52-70. DOI: 10.1080/15332969.2015.1112184

[59] Thompson, R. F., & Spencer, W. A. (1966). Habituation: a model phenomenon for the study of neuronal substrates of behaviour. *Psychological review*, *73*(1), 16.

[60] OECD. (2020, October 7). E-commerce in the time of COVID-19. OECD; www.oecd.org. Retrieved from https://www.oecd.org/coronavirus/policy-responses/e-commerce-in-the-time-of-COVID-19-3a2b78e8/

[61] Wei, Z., Tang, Q., & Zhen, F. (2024). Spatial and social heterogeneities of residents' online shopping behaviours within a large Chinese city: The case of Weifang. *Applied Geography*, *167*, 103289.

[62] Wen, C., Prybutok, V. R., & Xu, C. (2011). An integrated model for customer online repurchase intention. *Journal of Computer information systems*, *52*(1), 14-23.

DOI: doi.org/10.1080/08874417.2011.11645518

[63] World Bank Group. (2022, June 28). COVID-19 drives global surge in use of digital payments. World Bank. Retrieved October 13, 2022, from https://www.worldbank.org/en/news/press-release/2022/06/29/COVID-19-drives-global-surge-in-use-of-digital-payments

[64] Wu. S. (2003). The relationship between consumer characteristics and attitude toward online shopping, *Marketing Intelligence Planning, 21*(1), 37-44. DOI: 10.1108/02634500310458135

[65] Yoopetch, C., Damrongmahasawat, S., & Promsiri, T. (2024). Exploring Factors Influencing Repurchase Intention of Thai Cultural Design Cloth Products. *Journal of Ecohumanism*, *3*(6), 154-174.

[66] Zhang, D., Zhang, Y., & Lou, S. (2024). What determines consumers' purchasing behavioural intention on social commerce platforms: introducing consumer credit to TPB. *Environment, Development and Sustainability, 26*(5), 13353-13373. DOI: 10.1007/s10668-023-04210-z

[67] Zhu, L., Li, H., Wang, F. K., He, W., & Tian, Z. (2020). How online reviews affect purchase intention: a new model based on the stimulus-organism-response (S-O-R) framework. *Aslib Journal of Information Management*, *72*(4), 463-488. DOI: 10.1108/AJIM-11-2019-0308

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