International Journal of Business and Society, Vol. 23 No. 1, 2022, 188-206

THE MEDIATION EFFECT OF ONLINE SHOPPING HABITS ON PERSONALITY TRAITS AND INTENTION TO RECOMMEND; THE COVID-19 EFFECT

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ABSTRACT

The coronavirus disease (COVID-19) has transformed conventional buying to online shopping habits. Despite the importance of customers' future behaviour, insufficient studies have highlighted the role of online shopping habits on the intention to recommend. The study investigated how the Big Five Personality Traits (BFPT) influence online shopping habits, the relationship between habit and intention to recommend, and the habit as a mediator by applying the convenience sampling method. A total of 347 usable data were collected online and analysed using structural equation modelling with the Smart Partial Least Squares (Smart PLS) software. The study found that agreeableness, conscientiousness, extraversion, and neuroticism positively affect online shopping habits, but not openness. Furthermore, online shopping habits positively impact the intention to recommend and mediate the relationship between the BFPT and the intention to recommend. The study also provides valuable information for conventional stores and online platform managers to develop marketing strategies to retain and attract new customers. Moreover, the study discussed the limitations and future research recommendations.

***Keywords*:** Big Five Personality Traits; Online Shopping Habit; Intention to recommend; Covid-19.

Received: 25 October 2020
Accepted: 17 July 2021
https://doi.org/10.33736/ijbs.4608.2022

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1. INTRODUCTION

Online shopping has become a norm for people worldwide with Shopee, Lazada, Amazon, and other online shopping platforms offering various online products and slowly eradicating physical stores. Besides, the online advancement of products that provide efficient support services for online transactions contributes to online shopping. Online shopping offers the convenience of usage, whereby users can conduct businesses wherever provided there is an internet connection, and the goods are available online. Moreover, online shopping extends to numerous products available through online shopping. The introduction of mobile payment systems that are traceable, cashless, borderless, and without time limitations have created new versatility that encourages new users to shop online (Kaur et al., 2020).

COVID-19 is highly infectious and transmitted through multiple channels, through direct and indirect contaminated objects or surfaces, close contact with an infected person, or mouth or nose secretions. Thus, numerous countries have introduced a movement control order to prevent the virus from spreading, limiting people from travelling outside to shop for necessities. Additionally, country leaders have started to promote the new norm such as working from home, staying at home, and going out only when necessary. Besides, there is a significant increase in online shoppers, whereby Akbar and Tracogna (2018) revealed that traditional buying habits have changed towards online platforms. In March 2020, Amazon announced hiring 100,000 full-time and part-time staff worldwide to support the astounding demand during COVID-19 (Selyukh, 2020). In May 2020, Ninja Van (a Singapore-based logistic services) invested USD 279 million to increase operation and meet the extraordinary demand for delivery services due to massive electronic commerce (e-commerce) activities. Malaysia has approximately 25.84 million active Internet users (80 per cent of the population) and the population has extremely high rates of mobile phone penetration (San, 2021) supporting the report produced by Bank Negara Malaysia, which online retail sales recorded the growth close to 200% during this pandemic (Idris, 2021).

Despite the efforts by the government and private sectors to combat the pandemic, Malaysia faces the third wave of COVID-19 in May 2021 due to consumers' reluctance to change habits such as preferring physical activities instead of purchasing online. Consequently, the government is forced to execute another movement control order (MCO) to flatten the COVID-19 curve, which justifies the importance of understanding how BFPT influences habit changes from conventional buying to online buying activities.

A new norm forms new behaviour that becomes a habit when consistently performed. According to Mergelsberg et al. (2020), habits are a mental representation of an action that fuels a behavioural response to a cue in the environment and is closely related to daily behaviours. In the study context, when online shopping is continuously performed, it becomes a habit. Although COVID-19 has transformed conventional buying into online shopping habits, the shift has been left out by most studies.

Multiple factors influence consumers' habits, namely psychological factors such as personality traits, which play a big role in understanding consumers' purchasing behaviour (Olsen et al., 2016). Personality traits have been investigated in numerous studies such as impulsive buying (Olsen et al., 2016), online group buying (Hossain & Rahman, 2019), online shopping (Huang & Yang,

2010), shopping (Goldsmith, 2016), mobile application (Huseynov, 2020) gaming self-efficacy (San-Martín et al., 2020) eating habit (Pfeiler & Egloff, 2020) and consumption behaviour (Awais et al., 2020). Nevertheless, few studies have focused on how personality traits influence online shopping habits, especially in the post-COVID-19 scenario. Although studies suggested that personality traits significantly influence an individual's habit (Awais et al., 2020; Pfeiler & Egloff, 2020), limited studies have highlighted the role of personality traits, especially BFPT, to explain consumer habits in online shopping. Furthermore, few studies have analysed BFPT and online shopping habits (Goldsmith, 2016). Hence, this study investigated the role of BFPT in understanding online shopping habits in the post-COVID-19 scenario.

Recommendations are more influential than marketing messages proposed by marketers. Chen et al. (2019) stated that most online shoppers greatly rely on recommendations before deciding to purchase a product. For instance, Amazon enjoyed a 30% increase in its sales due to recommendations. Despite the power of recommendations in changing consumer behaviour, few studies investigate the major factors influencing the intention to recommend (Ashraf et al., 2020; Kaur et al., 2020; Oliveira et al., 2016). Most consumer behaviour studies focused on the behavioural intention to buy or continue buying, but disregard the intention to recommend. As mentioned previously, only a few studies highlight the influence of habit and the intention to recommend.

The pandemic has converted conventional buyers to online shoppers. Therefore, the study investigated the role of BFPT on online shopping habits and its impact on the intention to recommend among Malaysian online shoppers. Besides contributing to the limited literature on BFPT and online shopping behaviour, the study also presents the mediating effect of habit on the relationship between BFPT and the intention to recommend. The paper provides insightful information for marketing managers to develop strategies that cultivate and enhance online shopping behaviour based on consumers' personality and promote recommendations among online shoppers.

2. LITERATURE REVIEW

The BFPT consists of five traits that have been widely used to predict human behaviour in numerous studies (John & Srivastava, 1999). According to (Pfeiler & Egloff, 2020), the BFPT states traits as reliable forms of thoughts, feelings, and behaviours that differentiate individuals and explain individual variations in the five domains known as neuroticism, extraversion, openness, agreeableness, and conscientiousness. Hence, the model is proven valid for different contexts, cultures, and populations (Barrick & Mount, 1991; Huseynov, 2020). According to Schmitt et al. (2007),Based on a study conducted within 56 nations, the BFPT model was reliable and consistent; hence, used in many studies, including human resource management, information system, and marketing, to predict future consumer behaviours and habits. Furthermore, the BFPT is considered universal and applicable in multiple studies (Goldsmith, 2016). Although numerous studies related to the BFPT have predicted individual habits, the studies mostly focused on eating habits such as food choices (Pfeiler & Egloff, 2020), vegetables (Worsley et al., 2016), and meat products (Pfeiler & Egloff, 2018). Interestingly, previous studies have found many contradictory findings of how the BFPT influences individual habits.

2.1. Agreeableness

Mowen (2000) stated that individuals with the agreeableness personality are more empathic and easily express feelings such as sympathy, compassion, and mercy, leading to agreeableness that is positively connected to shopping habits (Bosnjak et al., 2007). The COVID-19 has forced the government to create a new norm that changed physical shopping to online shopping. Besides, an individual with an agreeableness personality tends to agree with whatever the authority proposes, including the purchasing behaviour. Moreover, changing from physical buying to online buying habits regards to protect against the virus spreading. Therefore, individuals with an agreeableness personality are supportive and willing to fulfil requests.

2.2. Conscientiousness

Conscientiousness refers to guideline-oriented, systematic, extra careful, highly responsible, punctual, and result-oriented individuals (Awais et al., 2020). The individuals are also organised, ambitious, and capable of setting their targets, which are advantageous for the conscientiousness personality (Nikbin et al., 2020). The personality is also special in terms of having the capability to analyse the situation, having a good understanding of the current situation, and making the best decision. In the study context, the COVID-19 is easily transmitted to another victim in multiple ways that enhance the chances of infection. Hence, being potentially listed as a COVID-19 victim could motivate the individual to create a positive online shopping habit. Hence, fearing COVID-19 could further cause conscientious individuals to be extra aware of their behaviour and involuntarily change their normal habits to new habits.

2.3. Extraversion

The extrovert personality or extraversion is one of the most popular personality traits highly used to predict consumer behavioural studies (Zurawicki, 2010). Extroverts are highly active in a social group, dominant, optimistic, lively, cheerful, and person-oriented, making extroverts popular among their team members (Awais et al., 2020; Nikbin et al., 2020). The extrovert personality always impacts others in a group or a large community, hence why the extroverts are highly connected with behavioural studies, especially in forming an individual habit. In the study context, information on COVID-19 shared via various social media platforms could also inspire and motivate extroverts to combat the virus threat by changing their buying habits.

2.4. Neuroticism

The neuroticism personality refers to an unstable individual who tends to get nervous from the occurrence in their surroundings. (Awais et al., 2020). Besides being easily disturbed by negative news, neurotic individuals are the least sociable and difficult to be with others (Ishiguro, 2016). This personality is formed through anxiety, fear, and the feeling of inferiority to others. Hence, neurotics prefer being alone and distancing themselves from others. As a result of the current pandemic situation and the ensuing recovery process that requires social distancing, online shopping has become important. In addition to neuroticism and the negative impact created by the pandemic, it is undeniable that this type of personality will change their behaviour to a habit.

2.5. Openness

Openness is related to curiosity, openness for new experiences, and willingness to change (Nikbin et al., 2020). Most individuals with the openness trait are imaginative, broad-minded, creative, and have many hobbies (McCrae & Costa, 1999; Wolfradt & Pretz, 2001), associated with the tendency to seek new novelty, making them more accepting of the happenings in their surroundings. Although COVID-19 is a new virus, individuals categorised with openness tend to change even with no compelling factor. Based on the concept, the worst impact from COVID-19 could encourage individuals with the openness trait to form a new habit.

Study findings revealed that personality types produce inconsistent results on consumer behaviours. Although some studies discovered that the BFPT has a positive relationship with behaviour, other studies found a negative relationship with consumer behaviours. Nevertheless, Bosnjak et al.'s (2007) study on online shopping habits suggests that personality traits are positively related to online shopping behaviour. Additionally, Huang and Yang (2010) stated that all five personality traits positively influence online shopping behaviours. Awais et al. (2020) and Goldsmith (2016) also proposed that BFPT has a significant relationship with online shopping behaviours. Therefore, the study proposed;

Hypothesis 1 (H1): Agreeableness is positively related to online shopping habits.

Hypothesis 2 (H2): Conscientiousness is positively related to online shopping habits.

Hypothesis 3 (H3): Extrovert is positively related to online shopping habits.

Hypothesis 4 (H4): Neuroticism is positively related to online shopping habits.

Hypothesis 5 (H5): Openness is positively related to online shopping habits.

2.6. Habit and intention to recommend

Habit refers to the atomicity of behaviour from repetitive technology usage (Nascimento et al., 2018; Rahi et al., 2018), demonstrating how habits could be formed by "locking in" new behaviours. A habit is also formed based on experience and learning (Cheng et al., 2020). Akbar and Tracogna (2018) mentioned that conventional buyers become online buyers once they start using online platforms. Meanwhile, studies in various contexts have also discovered that habit has a positive relationship with intention. Specifically, a habit has a positive relationship with the intention to continue using smartwatches (Nascimento et al., 2018), the intention to adopt online banking (Rahi et al., 2018), wearable technologies (Talukder et al., 2019), and online news (Cheng et al., 2020). Based on the discussion, the study proposed:

Hypothesis 6 (H6): Habit has a positive effect on the intention to recommend.

2.7. Mediation (Habit)

Several studies on consumer behaviour introduced mediators (Aguinis et al., 2017) to enhance the model predictive power (Halimi et al., 2021; Ngah, Gabarre, Eneizan, et al., 2021). Mediation is

defined as a mechanism variable that connects the predictor and criterion variables, also known as an indirect effect. Theoretically, personality traits could influence individual future behaviours. Previous studies confirmed the relationship between BFPT and habit and habit and behavioural intention. In order to complete the mediation analysis requirements, (Saeed 2020; Yasin et al., 2020; Yazdanpanah & Hosseinlou, 2017) proposed that BFPT has a positive relationship with intention. Consequently, the study identified the role of habit as a mediator between BFPT and the intention to recommend. Accordingly, the study proposed:

Hypothesis 7 (H7): Habit has an indirect effect on the relationship between agreeableness and the intention to recommend to be an online shopper.

Hypothesis 8 (H8): Habit has an indirect effect on the relationship between conscientiousness and the intention to recommend to be an online shopper.

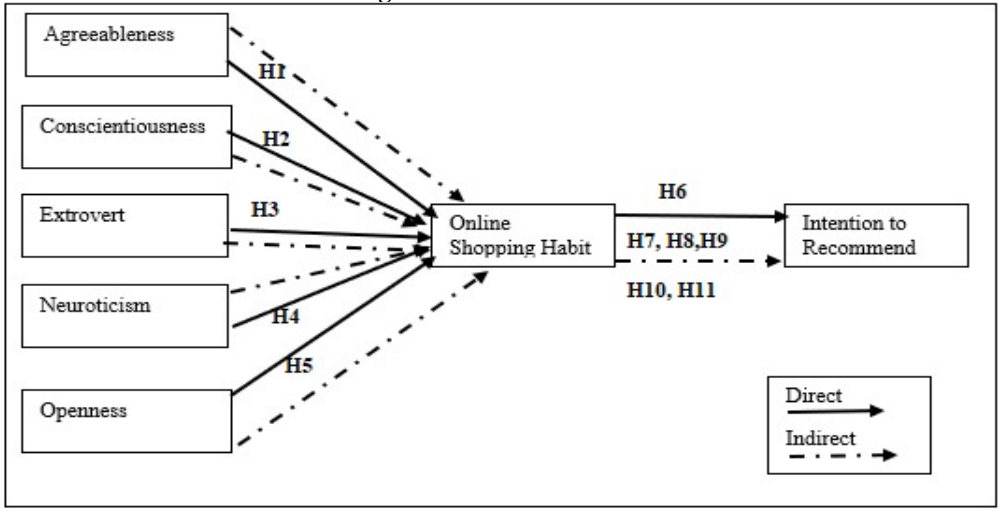
Hypothesis 9 (H9): Habit has an indirect effect on the relationship between extrovert and the intention to recommend to be an online shopper.

Hypothesis 10 (H10): Habit has an indirect effect on the relationship between neuroticism and the intention to recommend to be an online shopper.

Hypothesis 11 (H11): Habit has an indirect effect on the relationship between openness and the intention to recommend to be an online shopper.

Figure 1 illustrates the research model of the study.

Figure 1: Research Model



3. METHODOLOGY

The study employed a convenience sampling technique, specifically focusing on online shoppers during the COVID-19 outbreak. Notably, a convenience sampling method is sufficient as theoretical effects form the study scope (Hafaz Ngah et al., 2020; Hulland et al., 2017). Subsequently, a questionnaire aligned with the study context was shared online, and a filtered question was added, "Did you purchase through online during COVID-19". When the respondents' answer is no, the questionnaire stops there. Ultimately, 25 completed questionnaires were discarded as they were answered in a straight line.

Since the data was gathered via online, the study can't control who are the respondents of the study. Employing the google form, the link of the questionnaire was shared via what's app, Facebook and Instagram. Out of the 347 respondents, 23% were between the age of 18-25 years old, 35% were 26-30 years old, 22% between 31-35 years old, and 20% were above 36 years old. As predicted, the majority of the respondents (61%) were female. Furthermore, 26% of the samples had a diploma, 45% had a bachelor's degree as the minimum qualification level while 22% had a Master's degree and the remaining had a PhD. The findings showed that 49% of the respondents used online shopping 3-5 times during the pandemic, and 71% were married. Table 1 illustrates the respondents' profiles.

Table 1: Respondents' Profiles

Item	Frequency	%
Age		
18-25	80	23
26-30	123	35
31-35	75	22
36 and above	69	20
Gender		
Female	212	61
Male	135	39
Education		
Diploma	89	26
Degree	156	45
Master	74	22
PhD	28	8
Online Shopping Frequency During Covid 19		
1-2	75	22
3-5	169	49
More than 5	103	29
Status		
Single	101	29
married	246	71
Total	347	100

The power of analysis is generally applied to determine the minimum sample size of the study (J. Hair et al., 2017; Ngah, Thurasamy, Mohd Salleh, Jeevan, et al., 2021). Besides, the minimum sample size is based on model complexity. In the research model, the highest predictor of the model was 6, indicating the intention to recommend. Theoretically, research should use the power of 0.8 for medium effect size (Gefen et al., 2011). The study has six predictors, and the minimum sample

size is 97 based on Green's (1991) table. Hence, the sample size of 347 respondents was sufficient to test the hypotheses developed in the research framework. Meanwhile, all measurements were adopted from established literature in the study area, such as BFPT from Goldsmith (2016), habits from Venkatesh et al. (2012), and the intention to recommend from Oliveira et al. (2016).

4. ANALYSIS

4.1. Common Method Bias

The common method bias could be a serious issue if the data were collected from a single source and answered by the same person simultaneously (Ngah, Ramayah, et al., 2019; Podsakoff et al., 2012). The study applied the data collection technique using a single source remedied through a full collinearity test by Kock (2015). All the variables are regressed against a common variable in this method, and if the VIF ≤ 3.3, there is no bias from the single-source data. The results showed that the VIF values were less than 3.3, suggesting no single-source bias issue in the study. Table 2 illustrates the full collinearity results.

Table 2: Full collinearity

Agreeableness	Cons	Extrovert	Habit	Neu	OP	RECOMD
2.120	2.635	2.419	1.851	2.893	1.342	2.054

4.2. Measurement Model

The SmartPLS (Ringle et al., 2015) was also applied due to the nature of the study that is more on predictive purpose (Ngah, Gabarre, Han, et al., 2021; Urbach & Ahlemann, 2010). Hence, a two-step approach was applied, which are the measurement model (the convergent validity and discriminant validity) and the structural model (hypothesis testing) proposed by Anderson and Gerbing (1988). Convergent validity is the relationship between an item and the construct to ensure the items completely measure the specific constructs (Ketchen, 2013; Ngah et al., 2014). For instance, convergent validity is established if the loading is ≥ 0.708, the average variance extracted is (AVE) ≥ 0.5, and the composite reliability (CR) ≥ 0.7 (Hair Jr. et al., 2017). Table 3 shows that all values for the loading, AVE, and CR were higher than the threshold value established by (Hair. et al., 2017), concluding that the convergent validity is verified in the study.

Table 3: Convergent validity

Construct	Item	Loading	CR	AVE
Agreeableness	Agree1	0.879	0.879	0.708
	Agree2	0.840		
	Agree3	0.804		
Consciousness	Cons1	0.879	0.891	0.733
	Cons2	0.762		
	Cons3	0.919		
Extrovert	EXT1	0.865	0.905	0.761
	EXT2	0.906		
	EXT3	0.846		
Habit	H1	0.894	0.941	0.799

Construct	Item	Loading	CR	AVE
	H2	0.921		
	H3	0.912		
	H4	0.848		
Intention to recommend	ITR1	0.936	0.918	0.849
	ITR2	0.907		
Neuroticism	Neu1	0.912	0.925	0.804
	Neu2	0.900		
	Neu3	0.877		
Openness	Op1	0.906	0.942	0.845
	Op2	0.926		
	OP3	0.925		

Note: ITR 3 has been deleted due to cross-loading

The discriminant validity is measured using the Hetrotrait-Monotrait (HTMT) ratio, as suggested by (Henseler et al., 2015). The discriminant validity in this study was confirmed as the values were lower than 0.9 based on Franke and Sarstedt (2019). Moreover, Table 4 demonstrates that all the HTMT values were lower than the critical value established by the mentioned literature, confirming that the discriminant validity was not an issue in this paper.

Table 4: Discriminant validity (HTMT)

	Agreeableness	Cons	Extrovert	Habit	Neu	OP	RECOMD
Agreeableness							
Cons	0.322						
Extrovert	0.809	0.429					
Habit	0.568	0.542	0.574				
Neu	0.449	0.882	0.461	0.612			
OP	0.400	0.300	0.467	0.464	0.416		
RECOMD	0.759	0.386	0.798	0.537	0.448	0.402	

4.3. Structural Model

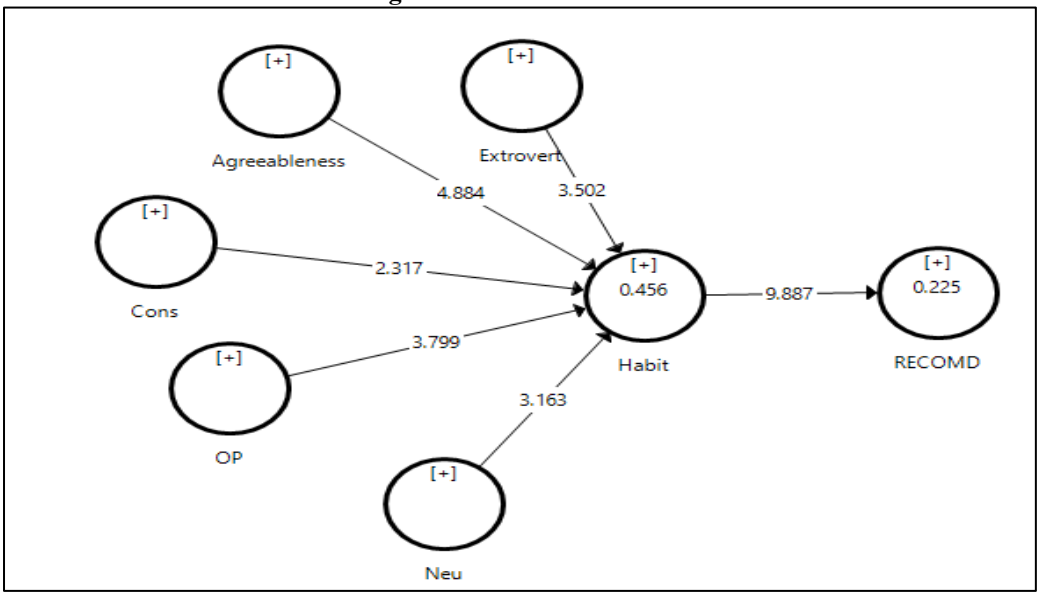
A multivariate skewness and kurtosis analysis was employed to ensure the data are not multivariate normal (Hair Jr. et al., 2017; Ngah, Thurasamy, et al., 2019). The analysis revealed that the data was not multivariate normal as Mardia's multivariate skewness ($\beta = 14.699$, $p < 0.01$) and Mardia's multivariate kurtosis ($\beta = 78.902$, $p < 0.01$). Additionally, the study relied on the path coefficients direction, t-values, p-values, and confidence interval for the structural model by employing a bootstrapping procedure with 5,000 sampling and resampling techniques proposed by (Hair et al., 2019). Table 5 and Figure 2 show a summary of the criteria to test the study hypotheses.

Firstly, the study tested the direct effect of BFPT on habit, whereby the R^2 was 0.456, indicating that BFPT explained 45.6% of the variance on online shopping habits. Meanwhile, agreeableness ($\beta = 0.193$, $p < 0.01$), conscientiousness ($\beta = 0.160$, $p < 0.01$), extraversion ($\beta = 0.161$, $p < 0.01$), and neuroticism ($\beta = 0.232$, $p < 0.01$) had positive effects on online shopping habits, hence supporting H1 to H4. However, openness ($\beta = -0.158$, $p < 0.01$) confirmed that the trait has a negative effect on online shopping habits, which is against the direction of the hypothesis, hence, H5 was unsupported. Next, the habit's effect on the intention to recommend was tested, whereby the R^2 of 0.225 suggested that habit explained 22.5% of the variance on the intention to recommend, thus supporting H6.

Table 5: Hypothesis testing, R^2 and f^2

H'thesis	Relationship	Beta	Se	T-Value	P-Value	Lower Level (LL)	Upper Level (UL)	R2	f2	VIF	Decision
H1	**Agreeableness --> Habit**	0.193	0.040	4.884	0.001	0.129	0.255	0.456	0.036	1.905	Supported
H2	**Cons --> Habit**	0.160	0.069	2.317	0.001	0.048	0.277	-	0.020	2.585	Supported
H3	**Extrovert –> Habit**	0.161	0.046	3.502	0.001	0.092	0.241	-	0.023	2.031	Supported
H4	**Neu --> Habit**	0.232	0.073	3.163	0.001	0.108	0.343	-	0.035	2.792	Supported
H5	**OP --> Habit**	-0.158	0.042	3.799	0.001	-0.229	-0.091	-	0.035	1.294	Unsupported
H6	**Habit --> Recomd**	0.474	0.048	9.887	0.001	0.390	0.551	0.225	0.290	1.000	Supported

Figure 2: Structural Model



4.4. Mediation Analysis

The study followed the guidelines by Preacher and Hayes (2008) regarding the confidence interval of the indirect effect while performing the bootstrapping procedure. When the confidence interval does not straddle a 0, there is a significant mediation. As shown in Table 6, Agreeableness → Habit → intention to recommend ($\beta = 0.092$, $p < 0.01$), Conscientiousness → Habit → intention to recommend ($\beta = 0.076$, $p < 0.05$), Extrovert → Habit → intention to recommend ($\beta = 0.076$, $p < 0.1$), Neuroticism→ Habit → intention to recommend ($\beta = 0.092$, $p < 0.01$), and Openness → Habit → intention to recommend ($\beta = -0.075$, $p < 0.01$), were all significant. Besides, the confidence intervals bias-corrected 95% did not show any intervals straddling a 0, thus confirming the study findings and supporting H7 to H11.

Table 6: Mediation Analysis

H'thesis	Relationship	Beta	Se	T-Value	P-Value	LL	UL	Decision
H7	**Agreeableness -> Habit -> Recomd**	**0.092**	**0.024**	**3.852**	**0.001**	**0.048**	**0.139**	**Supported**
H8	**Cons -> Habit -> Recomd**	**0.076**	**0.035**	**2.161**	**0.031**	**0.006**	**0.139**	**Supported**
H9	**Extrovert -> Habit -> Recomd**	**0.076**	**0.027**	**2.843**	**0.005**	**0.033**	**0.137**	**Supported**
H10	**Neu -> Habit -> Recomd**	**0.110**	**0.038**	**2.897**	**0.004**	**0.032**	**0.186**	**Supported**
H11	**Op -> Habit -> Recomd**	**-0.075**	**0.023**	**3.258**	**0.001**	**-0.119**	**-0.032**	**Supported**

4.5. PLS Predict

The predictive model was applied to predict relevance using the Partial Least Squares (PLS) predictor. Shmueli et al. (2019) proposed that the PLS predictor using a holdout sample-based procedure that produced case-level predictions on an item proved to be a better method than the blindfolding procedure. Shmueli et al. (2019) stated that when all PLS-RMSE values are lower than the linear regression model (LM-RMSE) value, there is a strong predictive power. When the majority of the PLS-RMSE results are lower than the LM-RMSE results, indicating there is a moderate predictive power. when the minority of the PLS-RMSE results are lower than the LM-RMSE results. Indicating low predictive power. Lastly, when all the PLS-RMSE results are higher than the LM-RMSE results, the predictive power is unconfirmed. Significantly, the Q2 must be > 0 to ensure that the model has predictive reliability. Table 6 presents that all values for habit for PLS-RMSE were lower than LM-RMSE, proving that the predictive power is strong, whereas predictive power is not confirmed for the intention to recommend.

Table 7: PLS Predict

Item	PLS-RMSE	LM-RMSE	PLS - LM	Q^2_predict
H2	0.888	0.898	-0.01	0.407
H4	0.859	0.873	-0.014	0.232
H3	0.918	0.941	-0.023	0.378
H1	0.945	0.96	-0.015	0.363
ITR2	0.908	0.816	0.092	0.21
ITR1	1.027	0.886	0.141	0.298

5. DISCUSSION

The study employed the BFPT to predict online shopping behaviour in the post-COVID-19 scenario. The study extended the topic by exploring the effects of habit on the intention to recommend among online shoppers during COVID-19. Additionally, the study enhanced the predictive power by testing habit as a mediator between the BFPT and intention to recommend. The data were analysed using structural equation modelling with the Smart PLS software through the convenience sampling method. Conclusively, out of 11 hypotheses tested, ten hypotheses were supported.

The findings revealed that four personality traits positively affected online shopping habits, namely agreeableness, conscientiousness, extraversion, and neuroticism, consistent with Huang and Yang (2010), who found that all BFPT positively related to online shopping habits. Hence, the results indicated that the individuals with these traits have a higher tendency to adopt online shopping habits. Furthermore, the higher the level of the traits, the higher the intention level to become an online shopper. The findings also produced insight into various parties, especially in managing conventional business and online business. Significantly, four out of five personality traits tend to shift from conventional to online shoppers. Nonetheless, the current conventional business management is still comfortable with the status quo, although there is a heavy reliance on the physical purchasing process. In the future, conventional businesses could be significantly affected as online businesses experience massive growth.

Based on the positive results and growth recorded by Shopee, Lazada and many other suppliers, there is a high possibility that multiple businesses will offer supplies on online shopping platforms. Besides, the results provided relevant information for the management of online shopping platforms. Since most personality traits gravitate towards online shopping habits, the management should expand the businesses by offering more products in the list of the current products. For example, groceries and other small household products could boost sales. Observably, Shopee leads the online shopping platform in Malaysia by linking the business with major hypermarkets in Malaysia, such as TESCO and Mydin and by offering next-day delivery,

Online shopping habits have introduced new habits and new scenarios such as food delivery services (Grabfood and Food Panda) becoming more common in Malaysia. Eventually, online shopping will be a habit for all Malaysians if the online platform offers the same services as food delivery services. Moreover, a good support service, especially in the delivery process, and the ease of using the platform during the payment process could convert conventional shoppers into online shoppers.

Nonetheless, the study findings showed that the relationship between openness and online shopping habits was negative. As mentioned previously, the hypothesis is supported if the path coefficient direction aligns with the direction of hypothesis, t-value ≥ 1.645, p-value ≤ 0.05, and the confidence interval does not straddle a 0 in between LL and UL. Hence, the four requirements must be fulfilled to prove that the hypothesis is supported. The results for openness showed a negative relationship; hence it did not fulfil the requirements to prove that the hypothesis is supported. Although the t-value, p-value, and confidence interval fulfilled the requirements, due to the direction of the hypothesis, H5 was rejected.

The study confirmed (Ngah et al., 2015; Ngah, Thurasamy, et al., 2019; Tuan Mansor et al., 2020), whereby the findings were negatively related and the hypothesis was rejected. The finding is also consistent with Yazdanpanah and Hosseinlou (2017), whereby openness did not significantly affect the habit of using public transport in Tehran, Iran. To elaborate, individuals with the openness trait negatively impact online shopping habits due to the nature of always open to new behaviours. Despite the openness, an unfavourable past behaviour would transform into new behaviour. In other words, past behaviour would not transform into a habit.

The research also found that habit has a positive effect on the intention to recommend online shopping habits, parallel with (Cheng et al., 2020; Rahi et al., 2018; Talukder et al., 2019). Thus, a positive habit towards online shopping before a recommendation is vital to promote the habit. Therefore, online platform management must ensure that current customers go through a positive experience to change their behaviour into online shopping habits.

The study revealed that habit mediated all the relationships between BFPT and the intention to recommend in the mediation analysis, proving the importance of habit in the intention to recommend among current online shoppers. Regardless of the personality type, the habit still plays a mediational role towards the intention to recommend. Hence, the management of online shopping platforms should form a positive habit for online shoppers if they want current customers to recommend their platform to other users, particularly conventional buyers.

5.1. Theoretical Implication

The BFPT has been extensively used to predict individual future behaviour in various contexts. Nonetheless, the lack of studies highlighted the role of BFPT in predicting individual habits, specifically regarding online shopping. Thus, the study enhanced the limited literature by extending the BFPT with online shopping habits and the intention to recommend. The findings also showed the capability of the BFPT in predicting online shopping habits, thus confirming BFPT universalness in explaining individual behaviour.

The study also introduced online shopping habits as a mediator between BFPT and the intention to recommend. Moreover, the study confirmed the importance of online shopping habits as a mediator in the relationship between BFPT and the intention to recommend. Most significantly, the study is one of the earliest investigating online shopping habits as a mediator between the BFPT and intention to recommend, particularly concerning COVID-19.

5.2. Managerial Implications

Based on the findings, managers from various categories could develop better marketing strategies and strengthen policies to encourage online shopping habits and the intention to recommend among the current online shoppers. Retailers should understand how individual personality influences online shopping habits to create a better approach in shaping the habit. Meanwhile, retail managers should focus more on the individual with agreeableness, consciousness, extraversion, and neuroticism personalities to form positive online shopping habits. Notably, individuals with an openness personality will constantly switch behaviours based on the situation; hence, focusing on an openness personality is not worthwhile.

The pandemic is the right time for the government to encourage consumers to shift to online shopping instead of performing conventional shopping. Strengthening the current MCO policy could shape better habits towards online shopping. Due to online retailers relying heavily on logistics services for customer satisfaction (Cichosz et al., 2020), the government and private sectors should collaborate to promote online shopping by providing discounts for delivery services or better service quality to increase online shopper satisfaction. Moreover, satisfaction commonly initiates a positive response for future behaviour (Ngah, Rahimi, Gabarre, Araya-Castillo, et al., 2021).

6. CONCLUSION

The study aims to identify the relationship between BFPT and habit, habit and intention to recommend, and the role of habit as a mediator within the research model. The results showed that four out of five traits from BFPT positively affected online shopping habits. Nonetheless, the openness trait had a negative effect on online shopping habits. Habit also had a positive effect on the intention to recommend and mediated all relationships between BFPT and intention to recommend. Besides providing literature on the role of BFPT and online shopping habits, the study also supplied helpful information for conventional business managers and online platform managers on how personality traits could influence future businesses. Managers could be equipped

with the findings to craft better policies and marketing strategies on maintaining the current customers while improving customer numbers as their survival is highly dependent on the number of customers.

Although the data were collected online, the study is limited to Malaysians. Hence, due to the non-probability sampling method, the findings should not be generalised with all Malaysians. Nevertheless, the research is crucial to understand the habit of online shopping behaviour of other countries that experienced a similar scenario as Malaysia. Furthermore, the data were collected during the COVID-19 pandemic, during which Malaysia proposed a strict guideline for the citizens that influence shopping behaviour.

The study is also limited to BFPT; thus, other personality traits of different perspectives could be applied in future studies. Hence, the paper proposed combining BFPT and other personality traits to analyse a wider view of how personality traits could influence a habit, particularly online shopping.

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