

## **Determinants of Self-Protection Practices in Online Shopping Among the Students of Higher Education Institutions, Malaysia**

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### **Abstract**

To date, technology has revolutionised consumer shopping experience, whereas the high internet penetration rate recorded in Malaysia causes the local online shopping market landscape to grow rapidly in recent years. Despite the convenience offered by online shopping, it also brings a new emerging area for consumer complaints and complicated issues implicating consumer protection. Accordingly, this study aimed to investigate the self-protection practices embraced when online shopping among the students of higher education institutions in Malaysia. The data were collected through a self-administered questionnaire distributed among 400 respondents, following which a statistical analysis was performed inclusive of Pearson's correlation and multiple linear regression. The outcome revealed that self-efficacy, media of consumer education, safety priority, and subjective norm pose a positive and significant relationship with self-protection practices, whereby safety priority was denoted as the most influential predictor for such practices. The findings of this study are highly useful for the government to educate consumers regarding self-protection practices that should be implemented when engaging in online shopping. They should firstly recognise the strategies required to protect themselves against falling victim to rogue online sellers and appreciate that the best form of protection is self-protection.

**Keywords:** media of consumer education, online shopping, safety priority, self-efficacy, self-protection practices, subjective norm

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## 1.0 Introduction

Malaysia has detailed its aims to promote a sustainable and dynamic economic growth by embracing the digital economy. With the high penetration rates of mobile devices, widespread availability of internet access, and mushrooming of online shopping sites, the act of online shopping has drastically changed the retail landscape. Approximately 16.6 million e-consumers were recorded in 2018, wherein 93.3 per cent from this particular number was hailed as online shoppers (Malaysian Communications and Multimedia Commission, 2018). The e-commerce spending grew by 24 per cent in the same year, wherein 51 per cent of the total e-commerce value spent was on consumer goods. Hence, the government is tasked with making the online economy growth a matter of national priority (Moey & Kemp, 2019).

Furthermore, the remarkable development in e-commerce, specifically online shopping, has led to some new problems and challenges pertaining to consumer's legal protection (Naemah & Roshazlizawati, 2013). Along with the staggering potential for profit and the ease of shopping online, unscrupulous and rogue sellers have also surfaced, taking advantage of consumer's ignorance of their rights and responsibilities. According to the Organisation for Economic Co-operation and Development (2018), the risks and challenges for e-consumers include being exposing to unfair business and advertising practices. They are: the term and conditions of the contract are lengthy and complicated, payment and transaction issues emerge, consumer data and privacy inadequately protected, the sales of an unsafe product previously banned or recalled from the market, and dispute resolution and redress taking a long time.

According to the Malaysian Communications and Multimedia Commission (2019), the total number of fraudulent online purchase cases recorded as of October 2018 was 2,813, thereby involving a total estimated loss of RM19,562,025.09. Meanwhile, the online shopping sector logged a higher number of complaints at a total of 10,615 complaints in 2018 alone (NCCC, 2019). According to National Consumer Complaints Centre (2019), the most prevalent complaint made by consumers is their inability to obtain a refund (22.8%), followed by online shopping scams (20.62%) and late delivery of purchased goods (17.62%). Meanwhile, other types of complaints include misleading information, product quality, customer service,

online payment, unauthorised cancellation, missing item, return, product safety, charges, and others.

In general, legal protection alone cannot solve all types of problems brought up by e-commerce as the consumers should be able to protect themselves when engaging in online shopping transactions. The advent of internet and social media should transform and empower these consumers with a greater access to information, which can be put to their advantage. Therefore, consumers who shop online should be empowered rightly by practising self-protection. For example, those who are aware of their rights and responsibilities should always check on the details published regarding the goods and services that they wish to purchase, the online seller's background, hold off from committing to any agreement before understanding the terms and conditions, or giving personal details easily (Shabana, 2016). Such practices are also consistent with the National Consumer Policy (NCP), which emphasises that consumers who practice self-protection are those who are smart, proactive, and responsible, as well as capable of protecting themselves when dealing in the marketplace (Afida et al., 2014).

Meanwhile, the revised NCP was launched in 2010 to inculcate self-protection within consumers and self-regulation among traders, as well as achieve an adequate level of consumer protection. This is ensured by providing a conducive environment to create a fair market and sustainable development in the domestic and global economic growth (Ministry of Domestic Trade, Co-operatives and Consumerism, 2010). The NCP strategies aim to develop a consumer who practices self-protection by being knowledgeable, well-informed, proactive, and responsible (National Consumer Policy, 2010).

University students undoubtedly have a high buying power in the online market. A survey in 2018 involving 3,167 higher education students in the United Kingdom succinctly revealed that 98 per cent of them would shop online (Johnson, 2020). This new generation, especially comprising those who are currently enrolled in higher education institutions, is more exposed to technology since it is used in their daily activities (Ofori & Nimo, 2019). Accordingly, these students shop online comfortably in their homes or hostels while saving time and energy (Deneen & Yu, 2018). Due to their huge power in the online market, it is important for policymakers and consumer protection educators to understand the self-protection practices undertaken by this population during online shopping.

Hence, the purpose of this study is to determine the self-protection practices undertaken when online shopping among the students of higher educational institution in Malaysia. The hypotheses in this study are as follows:

- H<sub>01</sub>*: There is no significant relationship between self-efficacy, media of consumer education, safety priority, subjective norms, and self-protection practices.
- H<sub>02</sub>*: Self-efficacy, media of consumer education, safety priority, and subjective norms are not significant determinants of self-protection practices.

## **2.0 Literature Review**

Although a lot of research works have focused on online shopping, those underpinning the context of online shopping self-protection remain limited. In this study, consumer self-protection practices are explored in line with the Social Cognitive Theory introduced by Bandura (1986), which explains human behaviour in terms of a three-way reciprocal model. Here, personal factors, environmental influences, and behaviour will continually interact (Bandura, 1986). Furthermore, the Social Cognitive Theory integrates individual factors from the aspects of cognitive, affective, and behavioural in order for them to be applicable in determining the factors affecting self-protection practices in online shopping. Henceforth, four variables are selected in this study to represent the Social Cognitive Theory framework, namely self-efficacy and safety priority for the cognitive aspect and subjective norm and media of consumer education for the environmental aspect. Meanwhile, the behavioural aspect represents the dependent variable, which is self-protection practices.

In general, self-efficacy refers to an individual's belief in their actions that influence their lives simply by managing their emotions, such as how they feel, think, and behave, as well as the motivation driving them to protect themselves (Bandura, 1994). Regarding online shopping, previous studies have mostly investigated this element in relation to one's ability, namely whether they highly believe that they can use the internet and have the required skill to complete an online purchase (Eastin, 2002; Hernandez et al., 2009; Perea et al., 2004;). The results have thus shown that effort and determination contribute to

high self-efficacy in order to control a situation and achieve the targeted goal (Zajacova et al., 2005). In contrast, those with low self-efficacy tend to put the blame on others when their planning seems to be failing (Ahmad & Safaria, 2013). Nevertheless, this study seeks to explore consumer self-efficacy from the aspect of online shopping self-protection practices.

Safety priority is a situation in which individuals focus on their safety and health to ensure that risk interpretation and making the differences across individual beliefs and perceptions over a situation are rendered easier (Steg & Sievers, 2000). Here, consumer practices towards data privacy, level of online security, and secured personal information in online shopping collectively and significantly contribute to the element (Farah et al., 2018). According to Huseynov and Yildirim (2016), the primary concern that consumers note in online shopping is regarding their data privacy and security of the financial transactions carried out. Moreover, Moen (2007) has stated that the manner in which individuals understand and interpret risk can further assist towards engaging in safe behaviour and improving their attitude.

Media, in general, refer to the advertising and transmission of ideas and information through various channels (Onete et al., 2014). According to Shodhganga (n.d.), media of different forms such as in print, electronic, and unconventional modes can be extremely useful in moulding the public opinion and should be used as a potent tool for consumer education and movement. The Ministry of Domestic Trade and Consumer Affairs (MDTCA), for example, has been implementing several media tools to spread awareness to consumers regarding online shopping self-protection, which include print, electronic, and social media.

Research findings by Simanjuntak et al. (2014) have previously indicated that electronic media such as television and radio are the most widely utilised information resources for accessing consumer education. This finding is further supported by Flowers et al. (2001), whereby the work has revealed the highly effective usage of television and radio as almost every household owns and uses them continuously. Meanwhile, Onete et al. (2014) have described the manner in which digital media such as the internet have emerged as an essential tool for informing and educating consumers. However, the study underline social media as an ineffective tool for consumer education since they are primarily used in the context of entertainment.

Next, subjective norm is an assumption about other's expectations for a specific behaviour that an individual will either perform or not (Huda et al., 2012). One may sense the social pressure they are subjected to simply to carry out a behaviour that is believed to be approved by other important groups (Gangwal & Bansal, 2016; Hernandez & Mazzon, 2007). The source of such influence typically may come from family members, relatives, friends, classmates, and colleagues. In this case, most of the study findings available have indicated that subjective norm does have a significant and direct influence on purchasing and online shopping (Aqila et al., 2016; Jamil & Mat, 2011; Leeraphong and Mardjo, 2013; Singh & Srivastava, 2018; Siti et al., 2012; Wen et al., 2020; Xie et al., 2011). This study, however, will determine the influence of subjective norm on online shopping self-protection practices.

In general, the NCP encourages consumers and sellers both to practice their rights and responsibilities for the purpose of increasing the consumer well-being through fair market practices (Dol et al., 2015). The policy states that a consumer who practices self-protection is an empowered individual who has access to information, is capable of protecting themselves, and aware of every decision made when dealing with the market (National Consumer Policy, 2010). Furthermore, Bandura (1986) has emphasised the notion that the capability of an individual to protect themselves is not by relying on external forces; instead, it lies in their ability to choose an environment that is suitable for protecting themselves. In this regard, consumers must practice self-protection in the current market and not only depend on the government for protection (Afida et al., 2014).

In fact, any problem will remain if the consumers merely complain to the government and consumer protection agencies, thereby putting the onus of fighting for their rights on these agencies without knowing how to apply them anyway in online transactions first and foremost. The act of using technology is complex, especially in the online environment, and the consumer is unfortunately more exposed to risk while carrying out a transaction (Organisation for Economic Co-operation and Development, 2016). This underlines the need and importance of effective self-regulatory measures in planning and implementing strategies for an evaluation and adaptation of new approaches in online shopping (Boateng et al., 2016; Cleary & Kisantas, 2017). Similarly, Jariah et al. (2013) have highlighted that enhancing the consumer's well-being requires them to know their rights

and responsibilities while engaging in a transaction, thereby ensuring self-protection against trader manipulation.

Figure 1 shows the conceptual model for this research, which refers to the Social Cognitive Theory by Bandura (1986) as the scholarly foundation regarding the concept of consumer self-protection practices in online shopping. To this end, four independent variables are employed, namely self-efficacy, media of consumer education, safety priorities, and subjective norms, whereas consumer's self-protection practices for online shopping are denoted as the dependent variable.

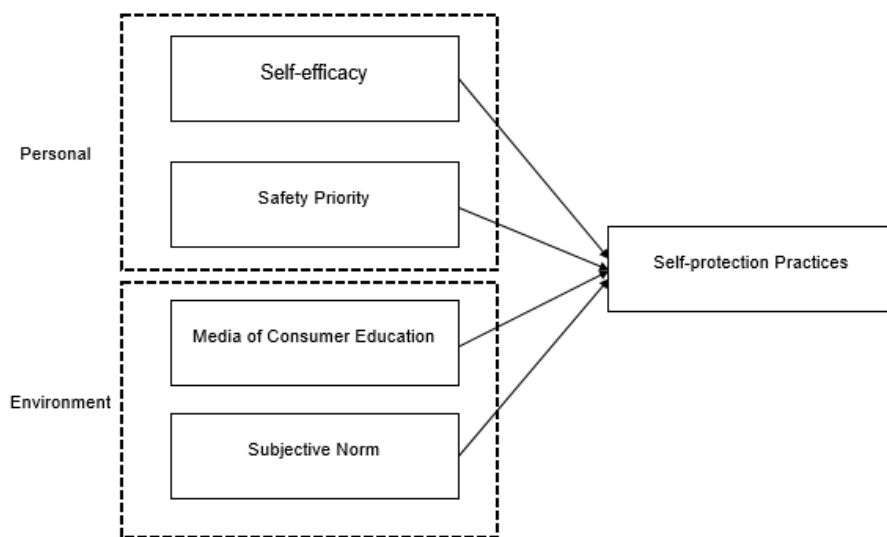


Figure 1 : Conceptual model of research

### 3.0 Research Methodology

#### 3.1 Population, Sample and Sampling Design

The target population for this study comprised of students enrolled in higher educational institutions and shopped online. They were targeted as the respondents to fully understand the manner in which they would protect themselves from being a victim in an online transaction. Furthermore, young shoppers aged below 40 years have been found to make frequent purchases compared to any other age groups (Malaysian Communications and Multimedia Commission, 2018).

Data collection was next conducted in four states to represent the geographical zones of Peninsular Malaysia, which covered the Central, Northern, Southern, and East-Coast region. The process was carried out in the duration of one month, whereby multiple enumerators were appointed in each zone and briefed about the questionnaires to ensure fully answered responses and provide additional explanation if needed. The time spent to answer the questionnaires was approximately 30 minutes.

A total of 400 respondents were selected via systematic random sampling and then requested to fill up the self-administered questionnaire. The criterion for their selection was having been engaged in online shopping. The first respondent was selected at the library entrance at 9 o'clock in the morning as the starting point, following which every fifth person who entered the location was chosen as a sample.

### 3.2 Research Instrument

The items for the study instrument were developed based on previous literature, thus categorised into six sections. In particular, Section A asked for the respondent's background, while Section B consisted of questions regarding self-efficacy and contained ten items adopted from the work of Schwarzer and Jerusalem (1995). The items were measured using a scale ranging from 1= "very untrue" to 5= "very true". Next, Section C comprised of seven items on the media of consumer education as adopted from Simunjak et al. (2013), which were measured using the scale ranging from 1= "strongly disagree" to 4= "strongly agree".

Meanwhile, Section D detailed the construct of safety priority with seven items adapted from Moen (2007), which were measured using a scale ranging from 1= "strongly disagree" to 5= "strongly agree". Subsequently, the construct of subjective norm was included in Section E encompassing five items adapted from Lee and Ngoc's (2010) study, whereby their measurement was done using a scale ranging from 1= "strongly disagree" to 5= "strongly agree". Finally, Section F comprised of 22 self-developed items on self-protection practices, which were then designed based on several focus group discussions and measured using a scale ranging from 1= "never" to 5= "always".

Accordingly, the complete questionnaire was subjected to a pretest among 30 selected consumers, thereby resulting in a



Cronbach's alpha value exceeding 0.700 and meeting the recommended value by DeVellis (2012). Furthermore, the test revealed good reliability as reflected in the values obtained as follows: self-efficacy (0.872), media of consumer education (0.7620), safety priority (0.797), subjective norm (0.843), and self-protection practices (0.891).

Next, factor analysis is a procedure used to identify, reduce, and organise a large number of questionnaire items into specific dimensions under a specific variable (Chua, 2009). In this study, it was conducted for the dependent variable in ascertaining the number of items measuring the dimension of self-protection practices. It would be considered appropriate according to Chua's (2009) suggestion that the Kaiser-Meyer Olkin (KMO) measure of sampling adequacy should be greater than 0.5, whereas the Bartlett's test of sphericity value should be significant (sig. value should be  $\leq .05$ ) (Pallant, 2011). Here, the KMO value for self-protection practices = 0.881 and Bartlett's test was found to be significant ( $p = .000$ ), thereby substantiating the dataset suitability for factor analysis.

Subsequently, factor analysis was conducted on all 22 items proposed for measuring the self-protection practices, yielding 51 per cent of explained variance for all three dimensions. The first, second, and third dimensions consisted of 11, 6, and 5 items, respectively, which were then tested in a reliability analysis. Accordingly, the reliability value for purchase transaction dimension was 0.875, while it was 0.786 for safety assurance and 0.771 for business requirements. However, these three dimensions were combined to generate one measurement of the dependent variable (i.e. self-protection practices), which was used in the inferential analysis.

### 3.3 Data Analysis

Data were analysed by using Statistical Package for Social Sciences (SPSS) version 22.0, wherein descriptive analyses, Pearson's correlation, and multiple linear regressions were employed. In particular, descriptive analysis was carried out to summarise the respondent's background for easier and better understanding, whereas Pearson's correlation allowed the determination of any relationship between the independent variables and self-protection practices. Meanwhile, multiple linear regression served to ascertain the determinants and most influential factor of self-protection practices accordingly.

## 4.0 Analysis of Findings and Discussion

### 4.1 Demographic Profile of Respondents

The background information of all 400 respondents in this study is summarised in Table 1. Based on the findings, the number of female respondents (64.5%) was higher than their male counterparts (35.5%) in which the gender imbalance was attributable to females making up the predominant student population in higher educational institution. Furthermore, more than half of the respondents were between 22 to 25 years of age (57.5%), followed by 18 to 21 years old (32.5%), 26 to 30 years old (6.5%), and above 31 years old (3.5%).

A look into their ethnicities showed that more than half of the respondents were Malay (79%), followed by Chinese (2.8%), Indian (9.8%), and others (8.3%). Due to the sample size being predominantly focused on students, almost all were single (93.8), while only 6.0 per cent were married and 0.2 per cent were divorced. In terms of education level, a majority of them were equipped with a bachelor's degree (70.3%), followed by diploma (17.8%), master's and PhD (6.5%), and foundation (5.5%). The number of respondents hailing from public educational institutions was much higher (83.8%) than private institutions (16.3%).

Furthermore, the findings revealed that more than half of the respondents were in their third (37%) and second (34%) year of study, followed by first-year (19.5%) and forth-year (9.5%) students. Regarding the field of study, a majority of them were of the social science background (74%), while the rest had science background (26%). Moreover, the sources of student allowance were mainly from the respondents' parents (75.8%), followed by loan (48.8%), family members (24%), part-time jobs (17.5%), *zakat* (13%), and scholarship (12.8%). This showed that parental resources were the main source of income for this population, wherein a majority would receive less than RM1000 (88.3%), while the rest received between RM1000 until RM5000.

Table 1 : Demographic profile of respondents (n=400)

Respondent's Background	Frequency	Percentage (%)
<b>Gender</b>		
Male	142	35.5
Female	258	64.5

Table 1 : Demographic profile of respondents (n=400) - continued

<b>Respondent's Background</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Age (years old)</b>		
18-21	130	32.5
22-25	230	57.5
26-30	26	6.5
31 & above	14	3.5
<b>Ethnicity</b>		
Malay	316	79.0
Chinese	11	2.8
Indian	39	9.8
Others	33	8.4
<b>Marital Status</b>		
Single	375	93.8
Married	24	6.0
Divorced	1	0.2
<b>Current Level of Education</b>		
Foundation	22	5.4
Diploma	71	17.8
Bachelor Degree	281	70.3
Master or PhD	26	6.5
<b>University</b>		
Public	335	83.8
Private	65	16.2
<b>Year of Study</b>		
1	78	19.5
2	136	34.0
3	148	37.0
4	38	9.5
<b>Field of Study</b>		
Science	104	26.0
Social Science	296	74.0
<b>Source of Student Allowance</b>		
Parents	303	75.8
Family Members	96	24.0
Loan	195	48.8
Scholarship	51	12.8
Zakat	52	13.0
Part-Time Job	70	17.5

Table 1 : Demographic profile of respondents (n=400) - continued

<b>Respondent's Background</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Allowance Received Monthly</b>		
Less than RM1000	353	88.3
RM1001 – RM2000	35	8.8
RM2001 – RM3000	7	1.8
RM3001 – RM4000	3	0.8
RM4001 – RM5000	2	0.5

#### 4.2 Descriptive Analysis of the Determinants of Self-Protection Practices

Table 2 illustrates the mean values for all variables, which range from 3.40 to 4.32. Accordingly, safety priority yielded the highest mean score (4.32) with a standard deviation of 0.546, followed by self-protection practices generating the second-highest mean score (4.11) and a standard deviation of 0.573. Then, the third score was obtained by subjective norm (M = 4.01) with a standard deviation of 0.758, while self-efficacy (M = 3.89) followed after with a standard deviation of 0.606. Finally, the lowest mean score obtained was for media of consumer education (3.40) and a standard deviation of 0.506. The findings collectively revealed that the respondents viewed their safety priority as the factor of utmost importance, wherein it would increase their level of concern factor when shopping online.

Table 2 : Mean Score of the Variables

<b>Variable</b>	<b>Mean score</b>	<b>S. D.</b>
Self-efficacy	3.89	0.606
Media of consumer education	3.40	0.506
Safety priority	4.32	0.546
Subjective norm	4.01	0.758
Self-protection practices	4.11	0.573

Note: Scale range 1-5, except for media of consumer education (1-4)

### 4.3 Pearson's Correlation Analysis

Table 3 : Result of correlation analysis

Variable	Pearson Correlation Coefficient, r	Sig. p
Self-efficacy	0.441	0.000
Media of consumer education	0.451	0.000
Safety priority	0.561	0.000
Subjective norm	0.452	0.000

\*Significant  $p \leq 0.05$ , \*\*  $p \leq 0.01$ ; \*\*\*  $p \leq 0.001$

Table 3 shows a significant correlation present between self-efficacy and self-protection practices as per the Pearson's correlation coefficient value ( $r = 0.441$ ) obtained, which indicates a moderate and positive relationship. This finding is consistent with those detailed by Yao and Linz (2008) in predicting the self-protection of online privacy tendencies, wherein self-efficacy is found to positively influence individual's attitude and perceived control towards online privacy protection strategies. Similarly, a moderate and positive relationship was also perceived between media of consumer education and self-protection practices ( $r=0.451$ ). It aligns the reports found in previous studies noting a positive influence posed by several types of media as the consumer education tools of choice, thereby leading to better performance (Ertmer et al., 2011; Junco et al., 2011; Novak et al., 2012).

Furthermore, safety priority revealed a strong and positive relationship with self-protection practices ( $r=0.561$ ), on top of which a higher strength of correlation was seen compared to the other variables. The finding is supported by previous studies by Lee et al. (2007) and Rundmo and Hale (2003), which have shown a significant relationship between safety priorities with attitude and safety practices. Finally, subjective norm was also linked to a positive relationship with self-protection practices ( $r=0.452$ ). This finding is in support of several other studies that have indicated such positive relationship between subjective norm and the intention in online shopping and actual purchase behaviour (Aqila et al., 2016; Singh & Srivastava, 2018). In conclusion, the findings revealed significant relationships between self-efficacy, media of consumer education, safety priority, and subjective norm with self-protection practices. Hence, hypothesis  $H_01$  was rejected.

#### 4.4 Multiple Linear Regression

Table 4 : Result of multiple regression

<b>Variables</b>	<b>B</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
(Constant)	0.517		2.577	0.010
Self-efficacy	0.132	0.140	3.140**	0.002
Media of consumer education	0.136	0.120	2.757**	0.006
Safety priority	0.265	0.253	5.143**	0.000
Subjective norm	0.143	0.189	4.437**	0.000

$R^2=0.442$ ; Adjusted  $R^2=0.437$ ;  $F= 78.315$ ; Sig.  $F=.000$ ; \*\* $p\leq 0.01$

Multiple regression analysis was employed accordingly to establish the factors capable of predicting online shopping self-protection practices among students. Here, Exploratory Data Analysis (EDA) was conducted in ensuring that no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity occurred (Pallant, 2011).

Table 4 shows the results of regression analysis obtained in determining student online shopping self-protection practices. The output indicated the regression model to be statistically significant due to the significance of F statistics generated ( $F=78.315$ ;  $p\leq 0.05$ ). Meanwhile, the adjusted  $R^2$  would ascertain the percentage of variance explained by the independent variables that actually affected the dependent variable (Dhaka, 2019). Here, the adjusted  $R^2$  value of 0.437 was obtained, thus indicating that all four independent variables explained 43.7 per cent of the variance when assessing the students of higher learning institutions and their online shopping self-protection practices.

Moreover, the output of unstandardised coefficient analysis in Table 4 explains the extent to which the dependent variable (i.e. self-protection practices) varies with a predictor when all other predictors remain constant. For example, the unstandardised coefficient, B, for self-efficacy was equal to 0.132, thereby indicating an increment of 0.132 per cent in self-protection practices for every one per cent increase in self-efficacy. Meanwhile, the unstandardised coefficient, B, for media of consumer education was equal to 0.136, thus showing that every one per cent increase in media of consumer education is linked with an increment of 0.1236 per cent in self-protection practices.

Furthermore, safety priority yielded an unstandardised coefficient, B, equal to 0.265, showing that every one per cent

increment of the element could be linked to 0.265 per cent increase in self-protection practices. Meanwhile, the unstandardised coefficient,  $B$ , for subjective norm was equal to 0.143, suggesting that one per cent increase of the element would yield an increment of 0.132 per cent in self-protection practices. Collectively, all independent variables tested in this study positively influenced self-protection practices.

The standardised beta coefficient, in general, can compare the relative strength of the coefficients (Dhakal, 2019). Among all four predictors noted as statistically significant to online self-protection practices, safety priority was underlined as the most predictive factor ( $\beta=0.253$ ,  $p=0.00$ ) of online shopping self-protection practices. This was followed by subjective norm ( $\beta=0.189$ ,  $p=0.00$ ), self-efficacy ( $\beta=0.140$ ,  $p=0.002$ ), and media of consumer education ( $\beta=0.120$ ,  $p=0.006$ ). Based on these findings,  $H_02$  was thus rejected.

Nevertheless, the above outcomes are consistent with other previous studies that have associated safety priorities with individual practices to safeguard themselves against risks (Isa et al., 2015). The study by Moen (2007), for example, has established that the element poses a strong relationship with the consumer's intention and behaviour to perform certain positive actions in ensuring their personal safety. Similarly, the research findings by Moen and Rundmo (2006) have also suggested that safety priorities are closely related to consumer's safety practices, aiming at the avoidance of risks generated from dangerous and unsafe threats.

## 5.0 Conclusion and Recommendations

This study successfully examined several factors affecting self-protection practices in online shopping carried out by students. The findings subsequently revealed the presence of significant relationships between self-efficacy, media of consumer education, safety priority, and subjective norm with self-protection practices. Furthermore, the analysis underlined that all four predictors were statistically significant for self-protection practices, wherein safety priority is the most influential factor identified among the students of higher educational institutions with regard to self-protection practices in online shopping. Consequently, dissemination of these outcomes to the targeted population will aid and guide them in practicing wariness of unethical online sellers and being more aware of their rights and responsibilities as consumers. This is attributable to the scarce amount of research available to date on consumer online self-protection

practices despite their key importance in preventing them from being victims of unethical online sellers. Besides, consumers should not be primarily dependent on the government and legal enforcement system available in protecting their rights; instead, they also have to be self-reliant and practice self-protection as the first line of defence (Boush et al., 2015).

Accordingly, the implications offered by this study is crucial to assist the government, especially the Ministry of Domestic Trade and Consumer Affairs (MDTCA) and Malaysian Communications and Multimedia Commission (MCMC), in their bid to amplify consumer awareness. This may be undertaken by establishing consumer education through campaigns in encouraging consumers to protect themselves during online shopping transactions, thus reducing the number of complaints. Here, the safety priority aspects should be given specific emphasis.

Meanwhile, higher educational institution students may benefit from MDTCA's collaborative effort with the Student Consumer Movement (*Gerakan Pengguna Siswa*) to coordinate awareness programmes detailing self-protection practices. The body is a student association specifically established in higher educational institutions and linked to MDTCA, wherein one of its objectives is to create a smart, rational, and responsible new generation of users skilled in making purchasing decisions about goods and services. Hence, it is undoubtedly a good platform to provide guidance and exposure to students in the bid to understand their rights and practice self-protection while shopping online.

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