

Factors that Influence Online Purchasing Behavior among Students in Universiti Utara Malaysia

ABSTRACT

Aims: The rapid growth in Internet access among Malaysian showed more ventures towards e-commerce activity that contributes to significant value in national growth domestic product. As technology-driven industry is normally associated with younger generations that are more technology savvy, their purchasing behavior through online shopping platform is of interest.

Methodology:

Results: Result shows three major factors that influence online purchase including the behavior towards online shopping, trust, and perceived benefit.

Result also indicates 41.9% respondents have been victimized by financial fraud during online transaction at least once, thus the need to educate people in managing online financial risk.

Conclusion:

Keywords: factor analysis, online shopping, purchasing behavior, university students

1. INTRODUCTION

The internet in Malaysia has shown rapid growth, in which online activities are not restricted towards information seeking and entertainment industry, but it is now extensively being used for business and e-commerce activities. This platform is heavily used due to its versatility as it can be accessed in 24 hours. From 31.2 million population in Malaysia, 24 million are social media users, which allow them to have access to internet (Export.gov, 2019). The e-commerce platform now is not limited to the buying and selling, but shows significant divergence of economy such as in e-hailing services, food delivery, and the e-wallet facilities; giving more freedom and convenience for customers to choose services during their flexible time. However, retailing industry in e-commerce platform such as online shopping contribute significantly to the use of internet platform. In recent years, more e-commerce activities make use of social media platform such as Facebook, Instagram and Twitter to sell their products.

To date, Malaysia has 15.3 million online shoppers and 62% of mobile users use their devices to shop (Export.gov, 2019). In 2015, Malaysia saw the growth of 5.9% in Malaysia's growth domestic product (GDP) amounting to 68.3 billion, and 6.1% in GDP valued at 74.6 billion in 2016 contributing from the e-commerce platform. Malaysia plans to increase this growth rate from 10.8% in 2016 to 20.8%, contributing to 211 billion GDP in value by 2020 (NSTonline, 2018). In the year 2018, Lazada Malaysia sets the new record of sale during their annual 11.11 Singles Sale Day, where they managed to sell 27 tons Milo to customer within the first two hours of their sales, and estimated 3,000 transaction per minute during the day (Soyacincau, 2019). Whereas its competing platform Shopee.com also perform significantly well as they are able to secure 58,000 items sold within a minute, and 11streets.com saw three times higher activity in their online platform during this day

48 (Ringgitplus, 2018). Such behavior is consistent with Wolfinbarger & Gilly (2001) that
49 highlighted the pleasure of having freedom, be in control and fun are among reasons why
50 online shopping is enticing to customers.

51 Choudhury & Dev (2014) reported that young people are the majority of the online shoppers.
52 This may be caused by the familiarity of computer, internet and IT skills (Hubona & Kennick,
53 1996; Hernández, Jiménez & José Martín, 2011). Though possessing good internet ability
54 signaling to the digital savvy among the people, too much exposure to online platform can
55 lead to internet addiction (Young, 2004; Kuss, Griffiths & Binder, 2013; Rose &
56 Dhandayudham, 2014), security risk (Aldás-Manzano et al., 2009; Thakur & Srivastava,
57 2015), and financial risk (Koenig-Lewis, Palmer & Moll, 2010; Zheng et al., 2012; Martin,
58 Oliveira & Popovič, 2014).

59 In this study, we would like to investigate the purchasing behaviours among university
60 students in Universiti Utara Malaysia. They are within age group from 18 to 24 years old,
61 thus representing young adult in campus. Their online purchasing behavior will be assessed,
62 and factor analysis will be adopted (Thompson, 2004; Misiran et al., 2016; Misiran et al.,
63 2018) to extract determinants that strongly affect their attitude towards online shopping. We
64 adopted several works that discussed contributing factors that influencing online shopping
65 activity such as in Delafrooz et al. (2009), Delafrooz, Paim & Khatibi (2010), Eri, Aminul
66 Islam & Ku Daud (2011), George (2004) and Jadhav & Khanna (2016).

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68 **2. METHODOLOGY**

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70 **2.1 Method of Collecting Data**

71 This research wants to find out the factors that influence students' behavior towards online
72 shopping. In this research, the data was collected through questionnaire. Therefore, the data
73 is acquired as primary data.

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75 **2.2 Population of Study**

76 The target population for this research is all the students from one of residential hall in
77 Universiti Utara Malaysia (UUM). This residential hall comprises of different gender (male
78 and female) and the level of undergraduate studies varies from all semester.

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80 **2.3 Sampling Method**

81 In this study, simple random sampling method was adopted. In simple random sampling, all
82 samples having same chances to be chosen to estimate the population means, total and
83 proportion. In simple random sampling, the selection process is corresponding to a random
84 sampling. All possible samples that we can take from population having the same probability
85 of being chosen. The selected respondents must a student from TNB residential hall. The
86 respondents from TNB residential hall have been picked up randomly. Only undergraduate
87 students were considered for this study purposes. Figure 1 below illustrates the selection of
88 respondents.

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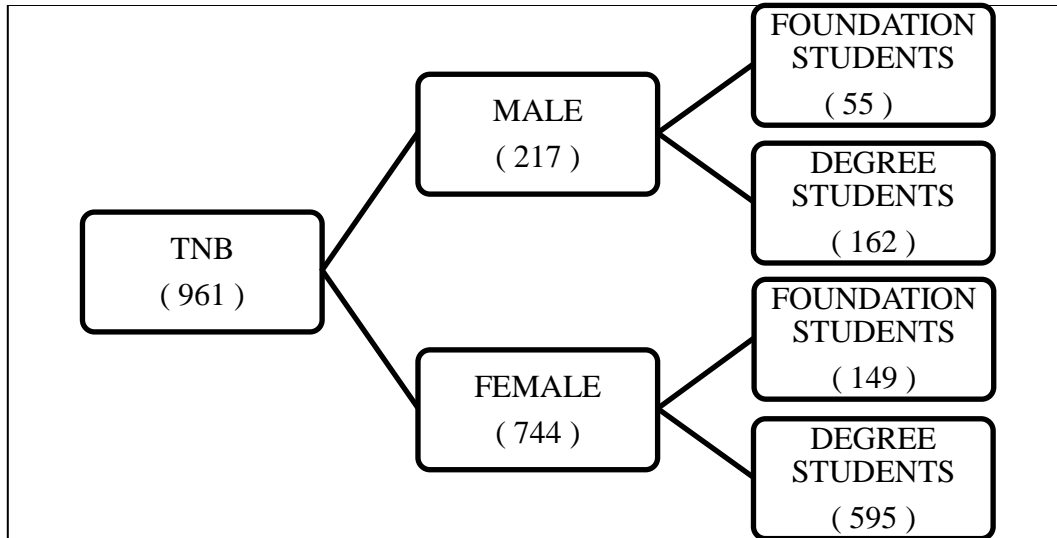


Figure 1: Total number of TNB students

The sample size was calculated by using a formula with a bound B on the error of estimation, which is:

$$n = \frac{Npq}{(N-1)D+pq} \quad D = \frac{B^2}{4}$$

where N denotes the size of the i th stratum, p denotes the population proportion for the i th stratum. The fraction p is approximated by 0.5 because no information about earlier study, $i = 1, 2, 3$. The desired is to estimate the population proportion p with bound of error on estimation equal to 0.05.

$$D = \frac{0.05^2}{4} = 0.000625$$

$$n = \frac{Npq}{(N-1)D+pq} = \frac{757(0.5)(0.5)}{(757-1)0.000625+0.5(0.5)}$$

$$= 261.9377$$

$$\approx 262$$

The population contains 757 undergraduate students in TNB residential hall. By using the formula of simple random sampling, 262 students were selected as a sample from the population. In total, 262 TNB residential hall students are selected to be a respondent answer the questionnaire.

2.4 Method of Data Analysis

In this study, primary data has been collected. The reliability and validity of the data were investigated. Questionnaire survey was used for this reserach. A set of questionnaire was design in order to collect the information. Moreover, we have to analyse questionnaire and respondents responds in order to identify the factors that influence students' behavior towards online shopping.

2.4.1 Reliability Analysis

Reliability analysis is determined by finding the proportion of systematic variation in a scale, which can be done by determining the association between the scores found from different administrations of the scale. Thus, if the association in reliability analysis is high, the scale yields consistent results and therefore reliable. The steps in reliability analysis are used to calculate the number regularly used in order to determine the scale of reliability and furnish information about the relationships between individual items in the scale. Reliability analysis can be performed in excel to test whether the questionnaire that we design is reliable or not. We can run the reliability analysis using SPSS. The questionnaire will be reliable if the Cronbach Alpha value is greater than 0.6 (Bland & Atltman, 1997). Therefore, the questionnaire is reliable for the further analysis.

2.4.2 Factor Analysis

Factor analysis is a technique that studies interdependences between variables. This technique is another type of data reduction tools. It tries to simplify the complicated and various relationships that found among a set of observed variables by reveal common dimensions that link the seemingly not related variables and consequently provides insight into the underlying structure of the data. Factor analysis is to identify and analyse the factors. The aims of factor analysis are to study the inter-relationships among variables and to find a new set of variables that are fewer in number than the original set of variables. Factor analysis is based on a model that assumes a variable consists of common and unique parts.

3. ANALYSIS AND RESULTS

Descriptive analysis shows 20% of male students answered the questionnaire while the balanced are female students, as the female population is higher in this residential hall. 40% respondents is age 18 to 20 years old, 50.90% respondents aged 21 to 22 years old, and 9.10% respondents aged 23 to 24 years old. For religion and ethnicity, 81.50% are Malay, 6.42% are Chinese, 4.60% are Indian, and 7.55% are others, with 85.70% Muslim, 6.00% Buddhist, 4.50% Hindu, and 3.80% respondents having others religion.

24.20% respondents are from College of Arts and Sciences (CAS), 56.20% respondents from College of Business (COB) and 19.60% respondents from COLGIS. Further, 33.60% of the respondents are from semester 1, 0.40% respondents from semester 2, 27.50% respondents from semester 3, 170.% respondents from semester 5, 1.50% respondents from semester 6, 19.60% respondents from semester 7 and 0.40% respondents from semester 8. There are least respondents from semester 2, semester 4, semester 6 because the number of students' enrolment in February intake is less compared to students in September intake. Finally, the allowance received by the respondents varies where 46.80% respondents get allowance from RM0 until RM100, 14.30% respondents get allowance from RM101 until RM200, 23.10% respondents get allowance from RM201 until RM300 and 15.80% respondents gets allowance above RM300 from their parents.

167 The analysis on the questions regarding online shopping showed that 23.4% of the
 168 respondents have been doing online shopping less than a year, 18.1% respondents have
 169 been doing online shopping in a year, 30.2% respondents have been doing online shopping
 170 from 1 until 3 years, and 28.3% respondents have been doing online shopping more than 3
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Table 1: Time spends on internet and online shopping

Items	Frequency	Percentage (%)
<i>How much time do you spend on internet every day?</i>		
Below than 1 hour	6	2.3
1 to 3 hours	58	21.9
4 to 6 hours	103	38.9
More than 6 hours	98	37.0
<i>How much time do you spend on online shopping?</i>		
Below than 1 hour	131	49.4
1 to 3 hours	115	43.4
4 to 6 hours	16	6.0
More than 6 hours	3	1.1

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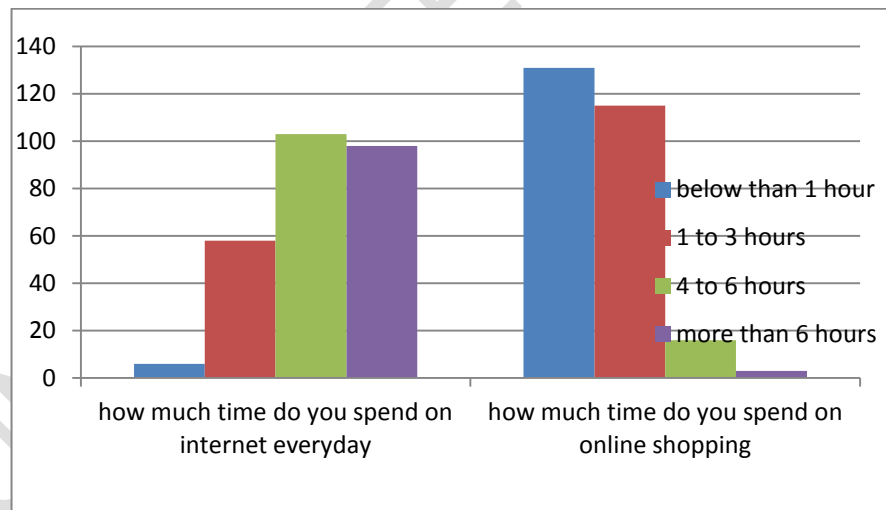


Figure 2: Time spends on internet and online shopping

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178 Based on Table 1, 2.3% respondents spend time below than 1 hour on internet every day
 179 while 49.4% respondents spend time below than 1 hour on online shopping. 21.9%
 180 respondents spend time from 1 until 3 hours on internet every day while 43.4% respondents
 181 spend time from 1 until 3 hours on online shopping. 38.9% respondents spend time from 4 to
 182 6 hours on internet every day while 6.0% respondents spend time from 4 to 6 hours on
 183 online shopping. 37.0% respondents spend time more than 6 hours on internet every day
 184 while only 1.1% respondents spend time more than 6 hours on online shopping.

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Table 2: Product frequently buy the most

Items	Frequency	Percentage (%)
What do you buy the most among these following?		
Clothing	147	55.5
Gadgets	24	9.0
Footwear	50	18.9
Others	44	16.6

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Based on the table, 55.5% respondents buy clothing, 9.0% respondents buy gadgets, 18.9% respondents buy footwear and 16.6% respondents buy other than clothing, gadgets and footwear.

Table 3: The best thing about online shopping

Items	Frequency	Percentage (%)
<i>What is the best thing you like about online shopping?</i>		
Variety of brands	102	38.5
Price	14	54.0
Timely delivery	11	4.1
Others	9	3.4

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Based on the table, 102 respondents (38.5%) prefer online shopping because of online shopping have variety of brands. 14 respondents (54%) opt for the price, 11 respondents (4.1%) prefer its timely delivery, and 9 respondents (3.4%) like to do online shopping because of others reasons.

Table 4: Total spending

Items	Frequency	Percentage (%)
<i>How much do you spend on online shopping on last 3 months?</i>		
RM0 – RM100	142	53.6
RM101 –RM200	70	26.4
More than RM200	53	20.0

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Based on Table 4, 142 respondents (53.6%) spend RM0 until RM100 on online shopping for the last 3 months, 70 respondents (26.4%) spend RM101 until RM200, 53 respondents (20%) spend more than RM200.

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Table 5: Experience for fraud

Items	Frequency	Percentage (%)
<i>Have you ever experience any fraud while paying online?</i>		
Once	67	25.3
Twice	28	10.7
More than twice	16	6.0
never	154	58.1

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Based Table 5, 67 respondents (25.3%) of respondents has once experience any fraud while paying online, 28 respondents (10.7%) experience any fraud twice, 16 respondents (6%) experience fraud more than twice, and 154 respondents (58.1%) has no experience of any fraud while paying online.

Reliability Analysis for Pilot Test

Table 6: Reliability statistics for pilot test

Reliability Statistics		
	Cronbach's Alpha Based on	
Cronbach's Alpha	Standardized Items	N of Items
.868	.885	26

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A sample of 26 students was chosen for the pilot test. Based on the table above, shows that the value of cronbach's alpha for this questionnaire is 0.868. Therefore, the questionnaire is reliable for the further analysis.

Reliability Analysis for Overall Question

Table 7: Reliability Overall

Reliability Statistics		
	Cronbach's Alpha Based on	
Cronbach's Alpha	Standardized Items	N of Items
.912	.916	30

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After doing a pilot test, questionnaires were distributed to the target respondents. A sample of 265 of students was chosen using simple random sample in SPSS. The value of cronbach's alpha for the questionnaire is 0.912. Therefore, the value of cronbach's alpha is greater than 0.6, then this questionnaire is reliable.

241 **KMO and Bartlett Test**
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Table 8: KMO and Bartlett Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.902
Bartlett's Test of Sphericity	Approx. Chi-Square	3066.129
	df	435
	Sig.	.000

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 245 Table 8 shows the output of Kaiser-Meyer-Olkin (KMO) and Bartlett test. KMO which is a
 246 measure of sampling adequacy is a statistic that shows the proportion of variance in
 247 variables that might be caused by underlying factors. The value of KMO is between 0 until 1.
 248 If the value is less than 0.50 then the result of factor analysis will possibly not very suitable.
 249 Based on the table above, the value of KMO is 0.902, and then the factor analysis is useful.
 250 Bartlett's test of sphericity tests is an identify of matrix of the hypothesis of the correlation
 251 matrix. It can detect the unrelated and unsuitable of the variables. If the significance level of
 252 Bartlett is less than 0.05, then the data for factor analysis is useful. The Bartlett test of
 253 sphericity approximately chi square is 3066.192 and all the variable are significant at 0.000
 254 which is smaller than 0.05.

Scree Plot

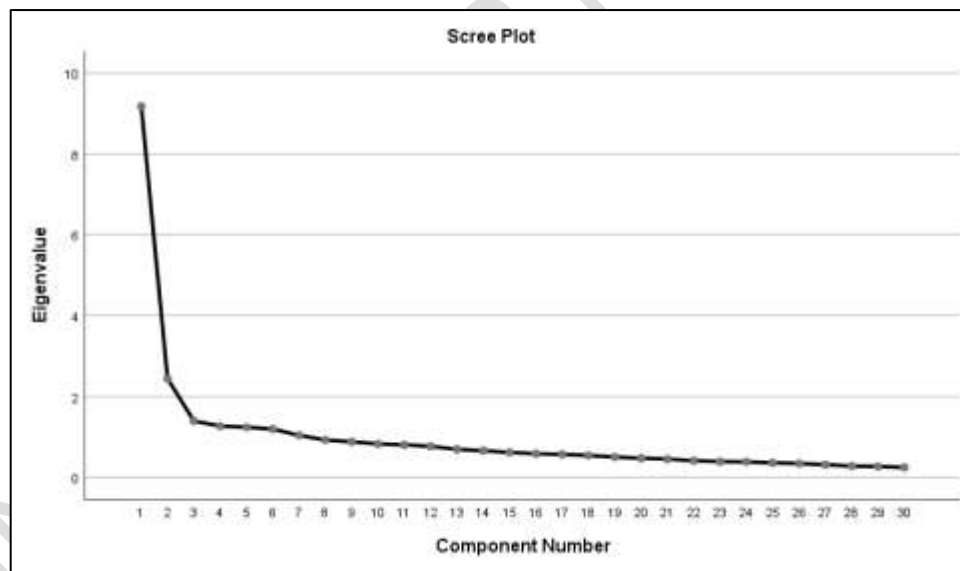


Figure 3: Scree Plot

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 261 Based on the scree plot above, it shows that there are 3 factors that will investigate in this
 262 study. The first factor is behaviour towards online shopping, second factor is trust, and the
 263 third factor is perceived benefit.
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Rotated Component Matrix

Table 9: Rotated Component Matrix

Rotated Component Matrix ^a				
No.	Item	Component		
		Behaviour towards online shopping	Trust	Perceived Benefit
1.	You are overall satisfied with your experience of shopping online.	.518		
2.	Shopping through the internet makes information available at any time of the day.	.528		
3.	I recommend good online shopping to my family and my friends.	.648		
4.	There are more choices offered through online shopping than conventional shopping.	.519		
5.	Based on my experience with online shopping in the past, I know it provides good service.	.475		
6.	I will continue to be loyal on the online stores that I am satisfied with.	.560		
7.	I shop online because the homepage of the online store is personalised or customised to my needs.	.639		
8.	I will continue shop online for long terms.	.729		
9.	I prefer to buy lower cost products online to reduce risk.	.279		
10.	I have sufficient information and experience of the product to enable me to purchase it with confidence without physical inspection.	.533		
11.	I find online shopping convenient.	.561		
12.	I have a stronger willingness to buy online when I am having enjoyable online shopping experiences.	.628		
13.	I often consider shopping online.	.529		
14.	I like to shop online from a trustworthy website.		.687	
15.	You will buy the product again from a same shop you are satisfied with it.		.626	
16.	Online shopping has cheaper goods.		.453	
17.	Online shopping saves energy.		.680	
18.	When shopping online you search for discounted items.		.640	
19.	When shopping, knowledge of your income effect how much you will spend on an item.		.549	

20.	I always compare prices with other shopping sites before buying.		.585	
21.	Comparing prices is easier through online shopping.		.594	
22.	Online shopping saves time.		.559	
23.	Online shopping is risky.		.294	
24.	When I buy from an online shopping, detailed information about products is important to me.		.662	
25.	When online shopping, I am not being able to physically inspect the goods before purchase.			.492
26.	The products same as it is shown in the website.			.684
27.	The information given about the products on the site is sufficient.			.617
28.	I have better shopping experience online compared to conventional shopping.			.469
29.	The product is not available in local shops.			.507
30.	I feel safe and secure while shopping online.			.455

Rotated factor matrix is to understand the results of the analysis. Based on the table above, there are 3 factors that influence students' attitude towards online shopping which is behaviour towards online shopping, trust and perceived benefit. Question number 1 until number 13 is categorized under behaviour factor towards online shopping. Question number 14 until number 24 is categorized under trust factor. Lastly, question number 25 until number 30 is categorized under perceived benefit factor.

Reliability Analysis for each factor

Reliability Analysis for Behaviour towards Online Shopping

Table 10: Cronbach Alpha for Behaviour towards Online Shopping

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.881	.883	13

Table 10 shows the reliability statistics of Cronbach's Alpha for the questionnaire for factor of behaviour towards online shopping. The value of Cronbach's Alpha for the factor for behaviour towards online shopping is 0.881.

Reliability Analysis for Trust

Table 11: Cronbach Alpha for Trust

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.833	.841	11

Table 11 shows the reliability statistics of cronbach's alpha for the questionnaire for factor of trust. The value of cronbach's alpha for the factor for attitude towards online shopping is 0.833.

Reliability Analysis for Perceived Benefit

Table 12: Cronbach Alpha for Perceived Benefit

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.686	.690	6

Table 12 shows the reliability statistics of cronbach's alpha for the questionnaire for factor of trust. The value of cronbach's alpha for the factor for attitude towards online shopping is 0.833.

4. CONCLUSION

As the conclusion, there are three factors that influence students' attitude towards online shopping which are behavior towards online shopping, trust and perceived benefit. Technological advances nowadays influence the current students' purchasing pattern more likely to buy products online. This study showed that majority of people use social media and internet to obtain information on the selected products before making purchases online. The increasing use of gadgets such as smartphone, and the popularity of social media can also be the factors that contribute to the frequency of online shopping. This is because it is easy to access the internet anywhere and anytime.

To obtain the information about product or services, people will generally evaluate testimonials and customer's feedback on social media. Hence, sellers should make priority to deliver their products and services similar as shown in the online image to avoid confusion from buyers. They should be aware of buyer's attitude who want to try new things, thus such demand need to be fulfilled through proper details of information describing the product. Reliable service, product that can be trusted with lower risk in financial transaction activities is necessary to attract new buyers online. The result also reported 41.9% respondents (nearly half of the respondents) have been victimized by fraud online transaction, thus the need to educate people on managing online financial risk.

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