# FACTORS THAT AFFECT STUDENTS IN UPSI MANAGING THEIR ONLINE PURCHASING BEHAVIORS

Emilda Hashim[a], Norimah Rambeli@Ramli[b], Norasibah Abdul Jalil[c], Asmawi Hashim[d],
Nor Najwa Adilla Abd Rafar[e]

[a]*Universiti Pendidikan Sultan Idris, Perak, Malaysia emilda@fpe.upsi.edu.my* *
[b]*Universiti Pendidikan Sultan Idris, Perak, Malaysia norimah@fpe.upsi.edu.my*
[c]*Universiti Pendidikan Sultan Idris, Perak, Malaysia norasibah@fpe.upsi.edu.my*
[d]*Universiti Pendidikan Sultan Idris, Perak, Malaysia asmawi@fpe.upsi.edu.my*
[e]*Universiti Pendidikan Sultan Idris, Perak, Malaysia*

## Abstract

This study is conducted to determine the factors and examine the extent to which the relationships between the following factors, benefit perception, risk perception, hedonic motivation, security factor, and website design influence online purchasing behaviors among students in Universiti Pendidikan Sultan Idris (UPSI). This study utilizes a quantitative approach using a stratified random sampling technique. It is analyzed using descriptive and inferential statistical analyses. The study samples consist of 377 UPSI students through collecting a distributed questionnaire via a Google Form link. Descriptive analysis finds that all factors that influence online purchasing have very high mean scores, with all mean scores of more than 4.30. Meanwhile, Pearson correlation analysis discovers that only risk perception and security factors are positively and highly correlated. Meanwhile, the other variables, either have positive and moderate or positive and low correlations between the paired-studied variables, with all values of $r > 2.80$. Apart from that, three factors, risk perception, hedonic motivation, and website design, are identified as having significant relationships with online purchases through multiple regression analysis. In conclusion, online purchasing depends upon risk perception, hedonic motivation, and website design factors, while benefit perception and security factors are not important elements when it comes to online purchasing.

**Keywords:** Online Purchases, Quantitative Statistics, University Students, Consumers, Management

## INTRODUCTION

The Internet has become a necessity for society in the present era because it is a global transaction for everyone to obtain various information faster and more widely (Fauzi et al, 2023). As a result, the e-commerce sector has recorded digital economic growth since COVID-19 hit the nation. The Department of Statistics Malaysia (2022) revealed that e-commerce revenue recorded a significant growth increase, which was 10.4 percent and reached RM291.7 billion in the first quarter of 2023. In addition, according to the Southeast Asia e-Commerce Barometer Report, online buyers in the Southeast Asia are expected to continue to increase to 380 million people by 2026 (Aziz, 2022).

The convenience of abundant online products in online purchases has provided buyers with more choices of goods and services and offered more quality products. Besides, there are cheaper, more attractive goods available through various applications, such as Shopee, Lazada, TikTok and so on that go beyond the local, state, and even national borders. However, some users are less aware of the safety

of online purchases because they think online shopping is fun, easy, and comfortable (Hairuzzamri & Hashim, 2023).

Therefore, this study aims to identify factors that influence online purchasing behavior among UPSI students. In addition, it also aims to examine the strength of the relationships between these factors, benefit perception, risk perception, hedonic motivation, security factor, and website design and online purchasing behavior among students in UPSI. Lastly, it determines whether these factors have significant impacts on online purchasing behavior management among undergraduate students in UPSI.

## LITERATURE REVIEW

This section reviews various studies done on online purchasing behavior management in terms of benefit perception, risk perception, hedonic motivation, security factor, and website design (Adnan, 2014; Al-Debei et al., 2015; Tanadi et al., 2015; Arisah et al., 2016; Anggriani & Athar, 2017; Mavilinda et al., 2020; Islam, 2021; Sikul & Ibrahim, 2021; Zakaria & Ramlan, 2021; Mohd Amin et al., 2022; Lye et al., 2022; Hasbullah and Salleh, 2022; Rahim et al., 2022; Santos & Marques, 2022; Azizan & Ridzuan, 2023; Yah & Angsor, 2023). Azizan and Ridzuan (2023) define online shopping as a process of buying and selling goods and services online using various platforms, such as websites, applications, and social media. The existence of these various platforms will increase the trend of online shopping among the current generation for its convenience and time-consuming (Adnan, 2014; Yah & Angsor, 2023).

In addition, previous studies have also proven that perceived benefits, perceived security, trust and safety, and social influence have a positive effect on the intention to use e-wallets (Arisah et al., 2016; Mohd Amin et al., 2022; Lye et al., 2022). According to Adnan (2014), convenience is important to buyers because it provides an advantage and allows customers to buy at any time and send the goods to any address they want. Tanadi et al. (2015) verify that both perceived benefits and risks have contributed significantly and positively to Generation Y consumers' tendencies to shop online. Rahim et al. (2022) assert that students will tend to make online purchases if the level of risk is low. Moreover, Hasbullah and Salleh (2022) declare that both security and trust play vital roles in determining consumers to buy online. Sikul and Ibrahim (2021) affirm that students think about various questions and see various feedback from previous buyers before deciding to buy goods online.

Zakaria and Ramlan (2021) reveal that buyers feel happy when they can search for information related to goods and spend time choosing and comparing the prices of those goods. Although it is said that hedonic motivation only has a positive effect on compulsive buying trends and not on impulsive buying (Anggriani & Athar, 2017), there are still studies that believe that hedonic motivation has a direct and significant influence on impulsive buying and product search (Mavilinda et al., 2020). In addition, Santos and Marques (2022) state that hedonic motivation has attracted buyers to browse shopping websites and fulfill their experiential and emotional needs. Besides, visual design is deemed to be an important component for customer satisfaction instead of information and service qualities (Islam, 2021). Specifically, Al-Debei et al. (2015) mention that the higher the quality of website design, the higher the trust put in by the online consumers and contribute to the perceived benefits.

Despite that, Adnan (2014) warns that security factors, such as privacy concerns and security issues can affect buyers' online search and purchase intentions. Yah and Angsor (2023) advise that buyer awareness of the risks of online shopping needs to be emphasized for consumer safety in terms of merchant fraud and the privacy of personal information.

## METHODOLOGY

This study employs a quantitative method and applies a stratified random sampling technique. The study targets UPSI students' population of 19,537 (Ministry of Higher Education, 2022). Meanwhile, the samples of this study comprise of 377 students from UPSI, based on Krejcie & Morgan (1970), through a distributed questionnaire data collection via a Google Form (GF) link. The GF link is shared on WhatsApp and QR scan. All questions contained in this questionnaire study are adapted from Adnan (2014). The questions regarding online purchasing behavior management study are divided into five

specific categories: benefits perception, risks perception, hedonic motivations, security factor, and website design and online purchasing behavior. Using the Statistical Package for Social Science (SPSS) version 25 software, the study data is analyzed using two analysis methods, namely descriptive and inferential statistical analyses. The descriptive analysis is done by utilizing frequencies, percentages, and mean score values. In contrast, the inferential analysis is examined by employing Pearson correlation and multiple regression analyses.

**Table 1:** Pilot study's result

| Sample size | Cronbach's Alpha Value |
|---|---|
| Benefit perception | 0.724 |
| Risk perception | 0.736 |
| Hedonic motivation | 0.761 |
| Security factor | 0.803 |
| Website design | 0.758 |
| Online Purchasing Behavior | 0.714 |

Table 1 depicts the findings of this pilot study involving 30 respondents of students from Bachelor of Education (Economics) program at the Faculty of Management and Economics. Chua's (2012) rule of thumb is used to interpret the Cronbach Alpha reliability measures from the table. According to Chua (2012), the reliability value of a satisfactory instrument and acceptable items is 0.65 or above. In line with Chua (2012), this pilot study confirms that the questionnaire is acceptable and very reliable, resulting in internal consistency, as the Cronbach's alpha of the coefficient value varies from 0.714 to 0.803.

**Table 2:** Mean score interpretation

| Mean Score | Intepretation |
|---|---|
| 1.00 – 1.89 | Very low |
| 1.90 – 2.69 | Low |
| 2.70 – 3.49 | Moderate |
| 3.50 – 4.29 | High |
| 4.30 – 5.00 | Very High |

**Source:** Education Policy Planning and Research Division, MOE (BPPDP) in Hashim, et al. (2023)

Table 2 shows the interpretation of the mean score. From Table 2, following Education Policy Planning and Research Division, MOE (BPPDP) (in Hashim et al., 2023), the mean score level is divided into several categories; a very low mean score level is obtained with a mean score of 1.00 - 1.89, a low mean score level with a mean score of 1.90 - 2.69, a moderate mean score level with a mean score of 2.70 - 3.49, a high mean score level with a mean score of 3.50 - 4.29, and a very high with a mean score of 4.30 - 5.00, respectively.

**Table 3:** Correlation coefficients interpretation

| Correlation Coefficients (r) | Interpretation |
|---|---|
| ± 0.01 – 0.09 | Ignore - No correlation |
| ± 0.10 – 0.29 | Low |
| ± 0.30 – 0.49 | Moderately High |
| ± 0.50 – 0.69 | High |
| ± 0.70 – 1.00 | Very High |

**Source:** Davies (1971)

This study also involves Pearson correlation analysis as shown in Table 3, which is conducted to identify the relationships' strength between paired variables, online purchasing behavior and the independent variables included in this study, namely perceived benefits, perceived risks, hedonic motivation, security factor, and website design. The correlation coefficients can be positively or negatively correlated, between 0 and ±1. From Table 3, following Davies (1971), the value of the correlation coefficient (r) equal to ± 0.01 – 0.09 indicates no correlation between paired variables; a value of ± 0.10 – 0.29 indicates a low correlation between paired variables; a value of ± 0.30 – 0.49 indicates a moderately high correlation between paired variables; a value of ± 0.50 – 0.69 indicates a high correlation between paired variables; lastly, a value of ± 0.70 – 1.00 indicates a very high correlation between paired variables.

Finally, multiple regression analysis is used to ascertain the relationships between the independent variables: benefit perception, risk perception, hedonic motivation, security factor, and website design, and the dependent variable, online purchasing behavior. Therefore, a general model can be written by adapting from Ramli et al. (2016) and Hashim et al. (2016), as follows;

$$OP = \beta_0 + \beta_1 BP + \beta_2 RP + \beta_3 HM + \beta_4 SF + \beta_5 WD + \epsilon \qquad (1)$$

where;
OP      = Online purchase
BP      = Benefit perception
RP      = Risk perception
HM      = Hedonic motivation
SF      = Security factor
WD      = Website design
ε        = Error

## RESULTS

The findings of this study are split into 2 parts, namely descriptive analysis and inferential analysis. The first part of the descriptive analysis is conducted on the demographic aspects of respondents consisting of gender, age, year of study, faculty, number of years being exposed to the internet, products frequently purchased online, and amount of online purchases in the past 6 months as displayed in Table 4 in terms of respondents' frequency distribution and percentages of the stated variables.

From the study in Table 4, 162 students (43%) of the total respondents are males and the remaining 215 students or more than half of the respondents (57%) are females. The majority of the respondents are between 24 to 26 years old with 202 students and 89 students aged 21 – 23 years old, who are more than 50 percent (53.6 %) and 23.6%, respectively. Similarly, more than half of the respondents are in their fourth year or final year of studies of 201 students (53.3%). The respondents are more or less of equal representation of diverse faculties, ranging from 26 students (7%), from the Faculty of Language and Communication to 48 students (12.7%), from the Faculty of Science and Mathematics.

In addition, most of the students have been exposed to the internet for more than five years totalling 140 students (37.1%). Moreover, respondents are engaged in the five most popular product categories purchased online, specifically clothes and accessories with 124 respondents (32.9%), daily usage items with 117 respondents (31%), beauty products with 79 respondents (21%), books and magazines with 29 respondents (7.7%), and other products and services with 28 respondents (7.4%), respectively. Furthermore, most of the respondents (124 students or 32.9%) have spent between RM101 and RM150 in terms of values purchased online in the past 6 months followed by 101 students (26.8%), who have spent around RM51 to RM100 in the past six months, respectively.

**Table 4:** Respondents' Profiles

| Characteristics | | Frequency (N) | Percentage (%) |
|---|---|---|---|
| Gender | | | |
| | Male | 162 | 43 |
| | Female | 215 | 57 |
| Age | | | |
| | 18 – 20 | 53 | 14.1 |
| | 21 – 23 | 89 | 23.6 |
| | 24 – 26 | 202 | 53.6 |
| | 27 - 29 | 33 | 8.8 |
| Year of study | | | |
| | 1st year | 53 | 14.0 |
| | 2nd year | 54 | 14.4 |
| | 3rd year | 69 | 18.3 |
| | 4th year | 201 | 53.3 |
| Faculty | | | |
| | FBK | 26 | 6.9 |
| | FPE | 43 | 11.4 |
| | FPM | 41 | 10.9 |
| | FSK | 47 | 12.5 |
| | FTV | 37 | 9.8 |
| | FKMT | 40 | 10.6 |
| | FMSP | 30 | 8.0 |
| | FSMT | 48 | 12.7 |
| | FSSKJ | 35 | 9.3 |
| | FSKIK | 30 | 8.0 |
| Years exposure to internet | | | |
| | Less than 1 year | 19 | 5.0 |
| | 1 – 2 years | 47 | 12.5 |
| | 2 – 3 years | 51 | 13.5 |
| | 3 – 4 years | 53 | 14.1 |
| | 4 – 5 years | 67 | 17.8 |
| Products purchased online | More than 5 years | 140 | 37.1 |
| | Daily usage | 117 | 31 |
| | Books & magazines | 29 | 7.7 |
| | Clothes & accessories | 124 | 32.9 |
| | Beauty products | 79 | 21 |
| | Others | 28 | 7.4 |
| Amount of online purchases the past 6 months | Below RM50 | 31 | 8.2 |
| | RM51 – RM100 | 101 | 26.8 |
| | RM101 – RM150 | 124 | 32.9 |
| | RM151 – RM200 | 60 | 15.9 |
| | RM201 – RM250 | 23 | 6.1 |
| | Above RM250 | 38 | 10.1 |

In the meantime, the second part of the descriptive analysis demonstrates the frequent online purchasing applications that are used by UPSI students as presented in Table 5. Shopee and TikTok online buying platforms are considered as two most preferred platforms used while purchasing online, representing 39.5 percent and 38.2 percent of the entire responses, respectively due to their free and

easy-to-use applications. Other famous platforms being used are Lazada (11.1 percent), Mudah (5 percent), Watson (4.8 percent), and Guardian (1.3 percent), respectively.

**Table 5:** Online purchase applications among UPSI students

| Apps | Frequency (N) | Percentage (%) |
|---|---|---|
| Guardian | 5 | 1.3 |
| Lazada | 42 | 11.1 |
| Mudah | 19 | 5.0 |
| Shopee | 149 | 39.5 |
| TikTok | 144 | 38.2 |
| Watson | 18 | 4.8 |

Meanwhile, the third part of the descriptive analysis determines the mean scores for five constructs that influence online purchases, specifically benefit perception, risk perception, hedonic motivation, security factor, and website design as portrayed in Table 6. The results from Table 6 indicate that all specified factors reflect very high mean scores, with mean scores of more than 4.30 for each variable. The construct that is said to have the most influence on online purchases is the perception of benefits with a mean score of 4.59. Next, the second and third-highest mean scores are followed by the constructs of website design and risk perception with mean scores of 4.46 and 4.43, respectively. In addition, the constructs of hedonic motivation and security factors have the same mean scores, which are 4.40. A very high mean score for each construct illustrates the importance of these factors in managing online purchasing behaviors.

**Table 6**: Mean score for factors influencing online purchases

| Constructs | Mean Score | Level |
|---|---|---|
| Benefit perception | 4.59 | Very High |
| Risk perception | 4.43 | Very High |
| Hedonic motivation | 4.40 | Very High |
| Security factors | 4.40 | Very High |
| Website design | 4.46 | Very High |

**Table 7:** The relationships between benefit perception, risk perception, hedonic motivation, security factor and website design and online purchases

| Variables | | Benefit perception | Risk perception | Hedonic motivation | Security factor | Website design | Online purchases |
|---|---|---|---|---|---|---|---|
| Benefit perception | Pearson Correlation | 1 | 0.440*** | 0.350*** | 0.282*** | 0.471*** | 0.324*** |
| | Sig. (2-tailed) | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 377 | 377 | 377 | 377 | 377 | 377 |
| Risk perception | Pearson Correlation | 0.440*** | 1 | 0.485*** | 0.575*** | 0.415*** | 0.405*** |
| | Sig. (2-tailed) | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 377 | 377 | 377 | 377 | 377 | 377 |
| Hedonic motivation | Pearson Correlation | 0.350*** | 0.485*** | 1 | 0.413*** | 0.468*** | 0.454*** |
| | Sig. (2-tailed) | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 |
| | N | 377 | 377 | 377 | 377 | 377 | 377 |
| Security factor | Pearson Correlation | 0.282*** | 0.575*** | 0.413*** | 1 | 0.297*** | 0.284*** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | | 0.000 | 0.000 |
| | N | 377 | 377 | 377 | 377 | 377 | 377 |
| Website design | Pearson Correlation | 0.471*** | 0.415*** | 0.468*** | 0.297*** | 1 | 0.497*** |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| | N | 377 | 377 | 377 | 377 | 377 | 377 |
| Online purchases | Pearson Correlation | 0.324*** | 0.405*** | 0.454*** | 0.284*** | 0.497*** | 1 |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| | N | 377 | 377 | 377 | 377 | 377 | 377 |

*** 0.01 level of significance

Furthermore, inferential analyses want to examine the strength of the relationships between all dependent and independent variables, as well as to investigate the significant relationships between those variables. The former is analyzed using Pearson correlation analysis as shown in Table 7 while the latter is analyzed using multiple regression analysis as revealed in Table 8.

By looking at Table 7, despite very high mean scores between the constructs, the result of the correlation analysis discovers that only risk perception and security factors have a positive and high relationship ($r = 0.575$, $p < 0.05$). Most of the paired variables have moderately high correlations. The correlation between website design and online purchases is positive and moderately high ($r = 0.497$), followed by the correlation between risk perception and hedonic motivation ($r = 0.485$), benefit perception and website design ($r = 0.471$), hedonic motivation and website design ($r = 0.468$), hedonic motivation and online purchases ($r = 0.454$), benefit perception and risk perception ($r = 0.440$), risk perception and website design ($r = 0.415$), hedonic motivation and security factor ($r = 0.413$), risk perception and online purchases ($r = 0.405$), benefit perception and hedonic motivation ($r = 0.350$), and benefit perception and online purchases ($r = 0.324$), respectively. Finally, website design and security factor ($r = 0.297$), security factor and online purchases ($r = 0.284$), as well as the perception of benefits and security factor ($r = 0.282$) are positively related and have low correlations between those paired variables.

**Table 8:** Multiple regression analysis

| Model | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | 1.779 | 0.256 | | 6.961 | 0.000 |
| Benefit perception (BP) | 0.037 | 0.062 | 0.030 | 0.595 | 0.552 |
| Risk perception (RP) | 0.130 | 0.050 | 0.151 | 2.610 | ***0.009 |
| Hedonic motivation (HM) | 0.165 | 0.039 | 0.222 | 4.225 | ***0.000 |
| Security factor (SF) | 0.002 | 0.035 | 0.003 | 0.057 | 0.9555 |
| Website design (WD) | 0.284 | 0.047 | 0.315 | 6.025 | ***0.000 |

Dependent variable: Online purchases (OP)
$R^2 = 0.329$
F = 36.436
***0.01 level of significance

From Table 8, the model is estimated as follows;
OP = 1.779 + 0.037 BP + 0.130 RP + 0.165 HM + 0.002 SF + 0.284 WD
Se = (0.256) (0.062) (0.050) (0.039) (0.035) (0.047)
t = (6.961) (0.595) (2.610) (4.225) (0.057) (6.025)

Next, a multiple regression analysis is conducted to see the significant relationships between the five variables in the study, benefit perception, risk perception, hedonic motivation, security factor, and website design, on online purchases. Based on Table 8, the coefficient of determination ($R^2$) of the estimated model is 0.329. It explains that 32.9% of the changes in the dependent variable, i.e. online purchases can be explained by the independent variables. Meanwhile, 67.1% of the change in online purchases can be explained by other factors outside the model, which is known as estimation error. In addition, the results of the F-test in this study are statistically significant. This is because it can be concluded that at least one of the independent variables is associated with online purchases. Furthermore, three of the five independent variables, namely risk perception, hedonic motivation, and website design significantly influence online purchases at the 99% confidence level for UPSI students. Meanwhile, the perception of benefits and security factors do not affect online purchases, therefore, these two factors are not important when managing online purchasing behavior among UPSI students.

## CONCLUSION

In conclusion, the findings from the study found that UPSI students will consider three factors when deciding to make online purchases, namely, risk perception, hedonic motivation, and website design. Despite their importance constructs, benefit perception and security factors are not crucial elements in this study. The implications of this study are useful for merchants and consumers to make improvements and raise awareness about the changes in the current generation regarding increasingly widespread online purchases. For more accurate and precise results, future research must include additional components that should be highlighted in managing online purchasing behaviors. Additionally, a large geographic sample of respondents from around the country must be included.

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## APPENDIX

The following table contains all questions in managing online purchases in specific categories: benefits perception, risks perception, hedonic motivations, security factor, website design, and online purchasing behavior. These questions were adapted from Adnan (2014).

| Item | Statement |
|------|-----------|
| | **Benefits Perception** |
| 1 | I shop online because I can make any purchase whenever I want to, which is available 24/7. |
| 2 | I shop online because I can get thorough product information more quickly online. |
| 3 | I shop online because I can choose from a wider range of products and get better discounts. |
| 4 | I shop online because I can easily compare prices of similar items. |
| 5 | I shop online because I can obtain other consumers' feedback or experts' reviews on any products that I want to purchase. |
| 6 | I shop online because I am looking for products that are hard to find in the nearby local market. |
| 7 | I shop online because there are many different ways to make payment for the purchased products. |
| | **Risks Perception** |
| 8 | I still shop online even though there is a significant chance of receiving a damaged item. |
| 9 | I still shop online even though I find it quite difficult to judge the quality of the products online. |
| 10 | I still shop online even though I find it quite difficult to resolve the problem if something goes wrong, such as requesting a refund from the seller. |
| 11 | I still shop online even though I may not receive the products I purchased online. |
| 12 | I still shop online even though I most probably will be charged for shipping when purchasing products online. |
| 13 | I still shop online even though I may not be getting better after-sales service for online purchases. |
| | **Hedonic Motivation** |
| 14 | I shop online because browsing and studying product information online is an excellent method to pass the time. |
| 15 | I shop online because online product information searches and reading are entertaining and engaging. |
| 16 | I shop online because buying things online is fun. |
| | **Security Factor** |
| 17 | I still shop online even though my credit card information might be stolen and used fraudulently. |
| 18 | I still shop online even though I might be charged more by the online merchants as they have my credit card information. |

19   I still shop online even though personal information that I provide to the merchants may be compromised and misused by third parties.

20   I still shop online even though it is risky due to the lack of strong cyber laws to penalize fraud and hackers.


**Website Design**

21   I shop online because it typically has an orderly appearance and is aesthetically pleasing.

22   I shop online because the purchasing guide is easy to follow and user-friendly.

23   I shop online because the product information offered is relevant, and the website's content is simple to read and understand.

24   I shop online because the procedure for placing an order and making a transaction is simple and fast.


**Online Purchasing Behavior**

For me, it is simple and easy to shop online using the internet.

25   I consider the opinions of my friends and family when making online purchases.

26   I will not have any trouble making online purchases since I know that my friends and relatives are also doing it without any problems.

27   I would not shop online if a webpage takes a long time to load.


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