

CHAPTER 11

IMPACT OF COVID-19 PANDEMIC ON E-COMMERCE AND ONLINE SHOPPING BEHAVIOUR AMONG STUDENTS OF HIGHER EDUCATION INSTITUTION (HEI)

Eng Jun Yew, Lim Jiun Xian, Quek Jun Man, Noor Akma Abu Bakar,
Mazlina Abdul Majid

ABSTRACT

The trend of online shopping has increasingly replaced offline shopping, even nowadays, due to how rapid the growth is currently. Being introduced as a new type of buying pattern, E-commerce has been adopted on a global scale by businesses nowadays, aiming to reach more online consumers throughout the world. Nevertheless, this shopping method is still active in the local community, especially for the twenties that show high reliance on it. It can be seen from the increasing rate of online transactions made by university students. This study mainly aims to study the relationship between online shopping via e-commerce and higher education institutions (HEI) students' behaviours as to learn more about the impact of online shopping behaviours,. Thus, a questionnaire survey as research design is applied and distributed among university students who are currently pursuing their studies at Tunku Abdul Rahman University College (TARUC) Pahang Branch, Malaysia (as a case study for this

Eng Jun Yew, Lim Jiun Xian, Quek Jun Man
Department of Computing & Information Technology, Tunku Abdul Rahman University College,
Pahang, Malaysia

Mazlina Abdul Majid
Faculty of Computing, Universiti Malaysia Pahang

Noor Akma Abu Bakar
Department of Computing & Information Technology, Tunku Abdul Rahman University College,
Pahang, Malaysia and Faculty of Computing, Universiti Malaysia Pahang

Noor Akma Abu Bakar (Corresponding Author)
e-mail: noorakma@tarc.edu.my

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Faculty of Computing, UMP Research Book Series: Emerging Technologies during the Era
of Covid-19 Pandemic,
Vol. 1, [insert doi here later]

research work). The questionnaire consists of two parts, Part A is the demographic information with six questions and Part B is online shopping-related questions with a total of 18 questions measured with 5-Likert-scale. Among these HEI students who were the sample of this study, the questionnaires distributed were considered valid to be analysed and proved the hypothesis. All the data collected were then analysed using GNU PSPP Version 3. Afterward, the Bivariate Correlation is implemented to analyse data for hypothesis testing. The findings of this study have analysed and revealed the weak correlation between the demographic information (gender, age, race, family income and employment status) and online shopping factors. However, the online shopping factor does greatly impact the consumers' shopping behaviours and shopping impacts, implying the more convenient the e-commerce platform, the more acceptable the e-commerce platform among consumers, which has shown the positive impact of shopping behaviour during COVID-19 pandemic.

Keywords Online shopping, e-commerce, consumer shopping behaviour, covid-19, HEI

INTRODUCTION

Since the Internet was invented, the rapid development brought from the Internet has led many businesses to subsequently change and evolve their traditional way of operation to gain more competitive advantages in many areas, which include e-commerce (WLG, 2018). With the accelerated rise of e-commerce throughout the world, more and more consumers have changed their traditional behaviour to rely more on the global online shopping platform, according to Arjun Mittal (2021).

Despite its latent potential on consumption patterns and the economy, the norm of e-commerce has not been fully embraced in Malaysia at the initial stage, which started in 2004. According to Eastlick and Lotz (1999), online shopping in the early stages of development might yield little information on customer attitudes

toward embracing the new online shopping channel and the elements that impact their attitude toward it, which has once again stated by Harn, Khatibi, and Ismail (2006) on the unfamiliarity and lack of knowledge on the new trend of online shopping among Malaysian consumers. With the launch of subsequent platforms, including eBay Malaysia in 2004, Lelong.com.my in 2007, Zalora in 2012, Lazada in 2012 and Shopee in 2015, Malaysia is said to have apparent growth in the e-commerce sector, which even outpaces the offline shopping market (Aprameya, 2020).

As mentioned in Arjun Mittal's (2021) study, it is indicated by recent researchers that online shopping, particularly in Business-to-Consumer (B2C), has risen, which makes it becoming more popular among many consumers. This is especially true in the context of Malaysia, where Malaysia's business-to-consumer e-commerce value has increased 39% in 2019 alone, even before the COVID-19 Pandemic (Aprameya, 2020). Its growth can even be potentially doubled during the COVID-19 Pandemic, where consumption patterns have shifted to the highly-promoted online shopping (Naszariah Nasni Naseri et al., 2021) due to movement restriction defined in governments' Standard of Protocol (SOP) and Movement Control Order (MCO). It can be seen from the survey result by Rakuten Insight (2021), in which about 34% of respondents mentioned their acts of making more online purchases during the pandemic. The statement is supported by a similar study, stating that 73% of Malaysians are more positive and comfortable about online shopping during the COVID-19 Pandemic (Syed Jaafar, 2020).

According to the report published by the Malaysian Communications and Multimedia Commission (MCMC), the percentage of local Internet users in 2020 is 88.7%, which is an increase of about 24% from 64.1% in 2012. Among the Internet users in 2020, about 64% of them go online for shopping, which shows an incline at about 11% compared with 2018, which only got about 53%. Also, there is an increment in the percentage for users performing financial transactions online from 54.2% in 2018 to 63.8% in 2020 (Malaysian Communications and Multimedia Commission (MCMC), 2021a). In the same report, it is stated that

Internet users were mostly people in their twenties and thirties, with 46.0% and 21.2%, respectively, followed by people in forties and below twenties, with 12.3% and 9.7%, respectively (Malaysian Communications and Multimedia Commission (MCMC, 2021b).

Because of the increasing rate of online transactions made by more consumers throughout the world, it is believed that university students nowadays have a high reliance on online shopping (Ahmad et al., 2018). With the high rate of reliance, there may be an impact on their shopping behaviour, which diverges based on different shopping modes. As the currently biggest age group in Malaysia population who has been engaged with electronic gadgets in daily life, as stated in another study (Tjiptono, Khan, Yeong and Kunchambo, 2020), shopping behaviours of generation Z, which is mostly the university students, may come into different perspectives due to them being described as the group with “technology imprinted into their DNA since their birth” (Šramková and Sirotiaková, 2020) (Črešnar and Nedelko, 2020). To learn and discover more on the relatedness of consumers’ characteristics to their online shopping behaviours, this study mainly aims to study the relationship between online shopping and university students, as well as: -

- i. To study the use rate of online shopping and the effect of it among university students.
- ii. To investigate the relationship between online shopping behaviour among university students and online shopping factors.
- iii. To evaluate the university students' reliability on online shopping.

RELATED WORKS

As highlighted earlier, the potential growth of the e-commerce sector in Malaysia has represented an exponential increment, which can be seen from the potential expectation on Compound Annual Growth Rate (CAGR) of 11.4% between 2019 and 2023

(Malaysia - eCommerce, 2020), and another analytics of expectation on increasing at rate of 14.3% for CAGR between 2020 and 2024 (COVID-19) accelerates e-commerce growth in Malaysia, says GlobalData (2020). As shown in several related studies, online shopping or e-commerce is being tied to the shopping impact and consumers' behaviour, which are possibly affected by factors. Hence, there are three parts to be looked through in this study.

Factors

Literature about measuring consumer perceptions of online shopping convenience conducted by Yang Zhilin has stated that online shopping convenience positively correlates with behavioural intentions (Zhilin, 2021). The more convenience related to online shopping, for example searching function and transaction, the greater the chance the customer will recommend the platform or repurchase from the same platform (Zhilin, 2021). We can see that one of the important factors stated in this literature is a user-friendly website to navigate, which can help in product specification and product classification.

A survey conducted by BrizFeel has collected data about consumer online retail shopping behaviour. The result of this survey shows that price is one of the main factors that affects the consumer's buying decision. Since comparing the price among various platforms is easy for online shopping, most of the customers will choose the platform that provides the lowest price (50 Consumers Online Shopping Behavior Trends [Survey] 2021, 2021) (Advantec, 2017). Based on the result of the survey, benefits like cut-price and e-vouchers from the e-commerce platform are also some of the important factors that attract consumers to buy the product.

Behaviour

It has been highlighted in the previous study (Palvia, 2009) (Pilík, 2012) (Pilík, Klimek, Jurickova and Palka, 2016) (Pilík, Juříčkova and Kwarteng, 2017) (Richard, Chebat, Yang and Putrevu, 2010)

on the importance of consumers' behaviour on online shopping. While e-commerce used in businesses is rapidly under development, consumers' own shopping habits have slowly been changed or possibly even evolved (Svobodová and Rajchlová, 2020), due to more expectations on the online platform. This subsequently causes consumers' shopping behaviour to undergo rapid transformation as well. With the consumers' shopping behaviours representing their positive or negative overall impression and evaluation of the product or service provided in the online platform (Shahzad, 2015), businesses have considered such transformation of behaviours as a trend that cannot be avoided (Mittal, 2021), in order to gain the benefits from the rise of Business-To-Consumer (B2C), especially in the current market environment where online shopping has become the more preferable medium for purchasing during the COVID-19 Pandemic.

For more information, based on related studies conducted by many researchers, different factors are used in measuring the consumers' behaviours to see how consumers can be easily motivated. For the first variable, it mentions consumers' attitudes towards platform's usability, which include convenience, product quality, cost benefit and time saving (Gozukara, Ozyer & Kocoglu, 2014). For the second variable, it states consumers' sensations on using e-commerce, whether they feel happy, satisfying, enjoyable or even avoidant. Furthermore, there is another variable mentioning the e-commerce platform's perceived ease of use and usefulness to consumers themselves (Babar, Rasheed and Sajjad, 2014) (Shahzad, 2015). Hence, the study's purpose is to know about the existence of relationships between the factors and behaviours.

According to research on online shopping behaviour done by Hashim Shahzad, some of the customers have fear of receiving a malfunctioning product over the internet through online shopping (Online Shopping Behavior, 2021). This group of customers wishes to receive their ordered item in an undamaged condition and accurately on time. The test results of a survey done by Yang Zhilin have confirmed that customers perceived overall online

shopping convenience had a significant and positive effect on their behavioural intentions, which includes the tendency to continue shopping online and to encourage others to shop online (Zhilin, 2021).

Impact

While being stated about the relatedness between the underlying factors on e-commerce and consumers' behavioural intention, consumers' satisfaction is deemed important as well. In this case, consumers' satisfaction represents consumers' emotional expression of how good the performance of e-commerce is to be when engaged by them, whether it is under their expectation or not (Rajeev, 2018). As quoted by Duarte et al., e-commerce being an online platform provides a convenient way for consumers to save their precious time and access anytime. The values beneath the online platform are what make online shopping impact customers' satisfaction (Duarte, P., e Silva, S.C. and Ferreira, M.B., 2018). How convenient is it?

Delivering online shopping convenience to enhance customer satisfaction and encourage e-WOM. *Journal of Retailing and Consumer Services*, 44, pp.161-169). As mentioned in a study by Joswi, it is also implied that consumers' expectations on online shopping platforms, which include providence of assists in several ways, detailed product information, time-and-effort-saving and exclusive low-price offers, automatically impact consumers' satisfactions. (Binoj Mascarenhas, 2019). As matched to the statement mentioned above, the findings of Njoki Kibandi and Mwikya Reuben on the impact of online shopping on consumer buying behaviour have shown that convenience and a wider selection of products have a positive effect on attitude towards online shopping (Njoki Kibandi and Mwikya Reuben, 2019). The conveniences provided by online shopping are more detailed product information, variety of items list, and shorter time to select and purchase desired items.

RESEARCH METHODOLOGY

A quantitative strategy is used for this research, since the main aim of this research is to investigate the use rate of online shopping and the effect it has on university students who are involved in explaining phenomena, by collecting numerical data and analysing the collected data by using mathematical methods. The data collected have been analysed to resolve the research question shown below: -

- RQ1: Does the demographic of individuals influence the tendency of online shopping?
- RQ2: Is there any relationship between online shopping factor and online shopping behaviour?
- RQ: Is there any relationship between the e-commerce platform features and shopping impact to the university students?

Before we start collecting the data, we have written some hypothesis that needs to be proven by using the data collected from the university student who is studying in Tunku Abdul Rahman University College (TARC), which include: -

- i. Ho1: There is no relationship between gender and shopping factor.
- ii. Ho2: There is no relationship between individuals' age and shopping factors.
- iii. Ho3: There is no relationship between individuals' race and shopping factors.
- iv. Ho4: There is no relationship between individuals' monthly income and shopping factors.
- v. Ho5: There is no relationship between individuals' employment status and factors that affect consumers' purchasing behaviour.
- vi. Ho6: There is no relationship between individuals' use rate of shopping platforms and shopping factors.
- vii. Ho7: There is no relationship between factors and consumers' purchasing behaviour.

- viii. Ho8: There is no relationship between factor and impact of shopping platform to the consumer.

Sampling

This study was conducted from July to August 2021. The participants of the study were the students of Tunku Abdul Rahman College University. An online questionnaire that was created by using Google Forms was given to the participants, by using email and other social media. The personal information of the participants was protected, which will not be used or given to any third party. A total of 47 participants have submitted the questionnaire.

Research Instrument / Data Collection

A questionnaire was designed to study the use rate of online shopping and the effect it has on university students. The response options of the questionnaire items represent 5 Likert-type scales, which are (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree), except for the questions relating to demographic characteristics, for example gender, income, age and others. This work only included the close-ended question, to reduce the difficulty in data analysis and comparison. The questionnaire has been divided into two parts, which are the demographic and online shopping-related questions, with a total of 6 questions for demographic part and 18 questions for the online shopping-related question. For the questionnaires survey being chosen as the data collection method, an online google form is used.

Questionnaire Design

Part 1: Demographics: (Online Shopping Behaviour, 2021) (Questionnaire about the online shop determination of customer satisfaction in China, 2021). Part 2: Questions regarding online shopping among students. The part-2 questionnaire consists of three separated sections, with every section planned to use the

Likert scale, scaling from 1 to 5, indicating the agree-or-disagree statements, as listed in the table below.

- Section A: Impact
- Section B: Factors
- Section C: Behaviour

Reliability Consideration

Cronbach's alpha testing has been used to measure the construct validity of the questionnaire. For the pilot test, based on the result of Cronbach's alpha testing, the computed value is 0.91, which exceeds that of the standard value of 0.75, as shown in Appendix 1 Figure 1 (left). The exceeded value does indicate the excellent level of internal consistency throughout the pilot test. For the actual test that have questionnaires collected from the sample, Cronbach's alpha = 0.92, which exceeds that of estimated 0.75, as shown in Appendix 1 Figure 1 (right). Therefore, it has been proved that the questionnaire's reliability has an excellent level of internal consistency. Besides, a series of correlation tests will be performed on the collected data to find out if there is a relationship between the two sets of values. The level of significance was at 0.05.

RESULTS AND DISCUSSIONS

Descriptive Statistics

Table 1 below shows the demographic characteristics of the respondents. From the data collected, it is clear that male respondents (students) are the majority. The statement was supported by the high percentage (72.3%) of male respondents, which contrasted with the low percentage (27.3%) of female respondents. The age grouping is categorised into three, according from the lowest to the highest frequency percentage, which is "18 or below" (2.1%), "19" (38.3%), and "20 or above" (59.6%). Almost all the respondents are Chinese (97.9%) and Malay respondents only occupied 2.1% of them. Table X shows

respondents own “RM 2000” monthly income, which is a majority group (53.2%), then the following are “RM 2000 to RM3000” (8.5%), “RM 2000 to RM 3000” (19.1%), “RM 3000 to RM 4000” (19.1%) and “Above RM 4000” (19.1%). Almost 30% are employed (both full time or part-time).

A multiple option question on the usage of shopping platforms was proposed and released via questionnaire to indicate the degree of browsing shopping platform usage among TARUC Pahang Branch students. 7 answer options are shown in table X, which indicate how frequently the user uses it. Slightly above 34% respondents use online shopping platforms and 21.3% of them use the platform once for every 2 or 3 months. Usage of “Once every two weeks” and “Weekly” shares the same portions of 12.8%, respondents who never have experience of using online platforms is 10.6%, and the remainder will consist of “Every day” (6.4%) and “2 times a week (2.1%)

Online Shopping Factor, Impact and Behaviour

16 questions regarding 3 aspects (which are factors, behaviours and impacts) of online shopping are discussed in this section. The research will look into how online shopping factors affect consumers in demographics, the impact of online shopping and shopping behaviour. The questionnaire survey included 3 major sections, which were made up of 16 questions and each question acted as a single variable. The first section is Online Shopping Impact (on the consumer) and it is made up of three variables, every variable is analysed and discussed separately.

Table 1 from Appendix 1 shows that a five-point Likert scale is employed, with a score of 1 indicating strong disagreement and 5 indicating strong agreement. The author utilises the score of each variable to explain, e.g. “I can easily access the e-commerce platform to perform online shopping using any digital gadget”. Strongly disagree indicate as the score of 1 in Likert value, 2 to disagree, 3 to neutral, 4 to agree and 5 to strongly agree, then the score of 47 input data is used as follow: $(1*1)+(0*2)+(4*3)+(16*4)+(26*5)=207$, divided by 47

respondents and get a mean value of 4.40 for this variable. This approach of calculation will be applied to all 16 variables.

Online Shopping Impact

“The Online Shopping Impact” section consists of six variables and each variable will be discussed separately. They believe they can use any digital device to access e-commerce platforms for online shopping. The average score of this variable is 4.4, which represents that many on average consumers agree that they effortlessly use any digital device to access the e-commerce platform and do online purchasing. The average Likert value is 4.23, which represents that they tend to agree with this variable and state that the majority can acquire further information from e-commerce platforms; view a variety of items directly listed on the e-commerce platform.

From the average Likert value of 4.28, it can be inferred that the majority of the respondents have positive experience as they can search wanted goods in a short period through the e-commerce platform. The average Likert value of 3.94 indicates that the average of respondents agree that they can pick and acquire all of their chosen goods from the e-commerce site in a short amount of time. The average Likert value of this variable is 3.94, which shows the majority of respondents felt the e-commerce platform's services and/or items have met their expectations; satisfied with the services and/or products provided in the e-commerce platform.

Online Shopping Factor

The shopping factor is made up of six different variables. As has been done previously, each variable will be analysed and discussed in detail separately here as well. The average score is 3.94, which represents the above average of respondents who agree that product pricing is relatively low and acceptable in online shopping. From the average Likert value of 4.15, it indicates that overall consumers' agreement towards this variable is strong and shows that consumers could obtain even more

benefits from the e-commerce platform, such as discounts and e-vouchers.

The majority of at least 89% and average Likert value of 4. It can be concluded that the majority of consumers prefer e-commerce platforms that allow them to see more product details. The average Likert value of 4.21 shows a positive and strong agreement of this statement by the average consumer that e-commerce platforms that show detailed product information is their priority. 28 proved that they were able to examine the same product using several internet search tools.

The average Likert value of 4.45 shows that on average, online consumers agree that they have the freedom to purchase via internet platforms/E-Commerce whenever they choose. The variable's mean value is 4.23, which can prove that a strong agreement of consumers towards this variable. It concluded that the majority of respondents can readily comprehend and follow the e-commerce platform's product classification system; "understand and follow easily on the product classification provided by the e-commerce platform".

Online Shopping Behaviour

Six variables are used to categorise shopping behaviour. Each variable will be discussed in its own right. The average Likert score of 4.49 indicates that the on-time delivery of ordered items from the e-commerce platform is important to online consumers. The average score of this variable is 4.47, which reflects that the majority of online consumers would consider having their ordered item delivered to them in its original and undamaged condition. This variable's average Likert score is 3.3, which indicates that on average, consumers shop online without regard for the budget. The average score of 3.6 reflected that the above-average number of online consumers are going to spend more time on the e-commerce platform, since it is more visually appealing.

The average score is 3.89, which indicates that online consumers agree on the statement that the product and service

offered on the e-commerce platform are something that they would want to invest more time and resources on in the future. The average score for this variable is 3.89, and this is likewise powerful and favourable to the above-mentioned variable. Conclusively, the online consumers would urge others to do their purchasing on the internet.

Analysis and Discussion

Correlation Test of Demographic Factors with Shopping Factor in this section, correlation tests will be conducted to see whether there is a relationship between the demographic factors and the shopping factor. Demographic factors are categorised to six elements, which are gender, age, race, employment status, monthly income and online shopping frequency. Each element will be tested with a correlation test with a shopping factor individually. The shopping factor value is the accumulated Likert value of 6 variables under the “shopping factor”. The Pearson correlation falls within the interval between 0.00 to 0.19, which indicates that there is a very weak correlation between the two tested variables. Since the p-value is greater than 0.05, the null hypothesis / h_01 is accepted, so then, it shows that there is no significant relationship between the two variables.

The Pearson correlation falls within the interval between 0.00 to 0.19, which indicates that there is a very weak correlation between the two tested variables. Since the p-value is greater than 0.05, the null hypothesis / h_02 is accepted, so then, it shows that there is no significant relationship between the two variables. The Pearson correlation falls within the interval between 0.00 to 0.19, which indicates that there is a very weak correlation between the two tested variables. Since the p-value is greater than 0.05, the null hypothesis / h_03 is accepted, so then, it shows that there is no significant relationship between the two variables. The Pearson correlation falls within the interval between 0.00 to 0.19, which indicates that there is a very weak correlation between the two tested variables. Since the p-value is greater than 0.05, the null hypothesis / h_04 is accepted, so then, it shows that there is no significant relationship between the two variables.

The Pearson correlation falls within the interval between 0.00 to 0.19, which indicates that there is a very weak correlation between the two tested variables. Since the p-value is greater than 0.05, the null hypothesis / h05 is accepted, so then, it shows that there is no significant relationship between the two variables. The Pearson correlation falls within the interval between 0.00 to 0.19, which indicates that there is a very weak correlation between the two tested variables. Since the p-value is greater than 0.05, the null hypothesis / h06 is accepted, so then, it shows that there is no significant relationship between the two variables. The degree of correlation between Shopping Factor and Shopping Behaviour was high, due to the value falling in the interval of 0.6 - 0.8 and the positive correlation is reflected as the Spearman's Correlation value shown was positive. Since the p-value is less than 0.05, the null hypothesis / h07 is rejected, so then, it shows that there is a significant relationship between the two variables. The degree of correlation between Shopping Factor and Shopping Impact was very high, due to the value falling in the interval of 0.8 - 1.0 and the positive correlation is reflected as the Spearman's Correlation value shown was positive. Since the p-value is less than 0.05, the null hypothesis / h08 is rejected, so then, it shows that there is a significant relationship between the two variables.

CONCLUSION

After we have done this research, we can conclude that e-commerce platform features have impacts on the university students who study in Tunku Abdul Rahman University College. Besides, e-commerce platform features also affecting university students' behaviour have been proven in this research. We also found that different demographic characteristics such as gender, age and income have no relationship with shopping factors.

However, the drawback of this study is the limited range of sample coverage, which only involves a total of 47 university students that are currently pursuing studies in Tunku Abdul Rahman University College (TARUC) Pahang Branch, Malaysia. The limited sample with a small amount of size may also obtain

less accurate results, considering there may be more students from other universities holding different views on shopping behaviours. Besides that, the collected data may be less accurate, which can be affected by any other factors like respondents' thoughts, and the current market environment, that this study has not included (Bakar, Majid & Adam, 2019).

To determine the study results of this finding, we plan to expand our analysis to the bigger sample group, which is other university students in Malaysia. Furthermore, we might investigate in depth on other possible factors, impacts and behaviours of customers related to e-commerce. For example, more demographic factors like the geographical location of the participants. By implementing these changes in future research work, we would be able to study more about the relationship between university students in Malaysia and e-commerce (Fernandez et al., 2021; Bakar et al., 2018).

ACKNOWLEDGEMENT

The research work is funded by Green Technology Research Lab, Universiti Malaysia Pahang, and supported by Faculty of Computing and Tunku Abdul Rahman University College (Pahang, Malaysia).

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