

## CONSUMER PURCHASE BEHAVIOUR TOWARDS ONLINE GROCERY IN MELAKA

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### ABSTRACT

*The growth of traditional grocery has been slowing down in recent years because of the emergence of online grocery shopping in Malaysia. Consumers are now more preferable to shop their groceries online compared with traditional groceries. Online grocery allows shoppers to make a comparison of prices between goods efficiently. Shoppers now can have more extensive choices of goods. They can compare goods without looking for the goods physically. Online grocery shopping appeals to be more comfortable because consumers can now purchase their groceries from home without the need to travel to a supermarket, pushing the shopping cart, and waiting in the queue for payment. This article aims to examine the effect of perceived usefulness and perceived ease of use towards consumer purchase behaviour in online grocery in Melaka. A sample of 156 questionnaires was distributed from different generations of people, including baby boomers, Generation X, Generation Y, and Generation Z in Melaka. The data was interpreted using Statistical Package for Social Science (SPSS) Version 24. It can be concluded that perceived usefulness and perceived ease of use have significant effects on consumer purchase behaviour towards online grocery use in Melaka.*

**Keywords:** Online groceries; consumer purchase behaviour; perceived usefulness, perceived ease of use; shopping

### INTRODUCTION

Online grocery has provided a better way for people to make and purchase groceries. Online grocery allows consumers to buy fresh and packaged food that will be delivered to our doorstep. The growth of online groceries has exponential growth of 15% in the last two years. Online grocery shopping will be the next popular sector in electronic commerce. Recently, businesses are encouraging consumers to build up the habit of purchase groceries online. Some reports discovered that 26% of online consumers are more willing to buy fresh groceries online. In Southeast Asia, Malaysia is one of the leading countries to adopt e-commerce with an increase of 88% growth rate for online grocery shopping sales.

Consumers are now looking for more convenient ways that enable them to make purchases anytime and anywhere just by connecting to the internet. The number of users in Malaysia is expected to increase by 5% over the next few years to achieve over 21 million users. The Nielson Company (2015) study stated that vendors are progressively presenting online grocery models to the consumers to interest the tech geek and time-conscious consumers. Research has been done and discovered that out of 30,000 respondents for consumers purchasing preferences on a global scale from 60 different countries, one-quarter of the respondents are already participated in buying groceries online.

Purchasing groceries online is getting more and more convenient for the consumer that people from diverse age groups are willing to shop online. Consumers now prefer to buy their groceries online compared with traditional groceries. Shoppers can make a comparison of prices between goods efficiently. It is easier for the consumers to purchase their groceries from home without going to a supermarket, pushing the shopping cart, and queueing for payment.

The present research offers a wide range of knowledge and an overview of different acceptance models regarding online grocery shopping in Europe and the United States of America. Additional research is needed to examine the result regarding the effect on developing countries like Malaysia. Therefore, this research aims to examine the effects of perceived usefulness towards consumer purchase behaviour and study the effects of perceived ease of use towards consumer purchase behavior. This research seeks to fill the gap with academic literature, additional new research findings needed regarding knowledge of online grocery behaviour in Melaka.

### LITERATURE REVIEW

#### ONLINE GROCERY SHOPPING

The online grocery will be considered a cast of online electronic commerce because it enables the user to purchase goods and household supplies such as food and various cooking ingredients regarded as perishables goods. Mortimer et al. (2016) stated that online grocery shopping differs from general online shopping because of the perishability and variability of the shopping activity's product and frequency. Chaffey (2011) defined electronic commerce as "all electronically mediated information exchanges between an organization and its stakeholders." According to Hiser et al. (1999), there is an existence willingness and ease to use the online grocery system and service in Texas America. Morganosky and Cude (2000) further agreed and proven that perceived convenience towards online groceries and time-saving is the purpose of why the consumer is willing to shop their groceries online.

Childers et al. (2001) research on the technology acceptance model proves that the perceived ease of use and perceived usefulness are considered a strong predictor for online grocery shopping. Additionally, using the online grocery system to shop allows the consumer to compare prices between goods efficiently. This system has delivered benefits for the consumer to have worldwide selection and products without searching them physically. A study conducted by Galante et al. (2013) further concluded that online grocery shopping appears to have more convenience than traditional grocery shopping.

### **TECHNOLOGY ACCEPTANCE MODEL**

According to Ajzen and Fishbein (1975), the technology acceptance model is used to explain technology usage behaviour, and the theory is inspired and relates to the theory of reasoned action. The technology acceptance model has a unique characteristic. Therefore, it is widely used in research related to the behaviour concerning the impact and effects of technology (Lee et al., 2003). Davis (1989) was the first to introduce the technology acceptance model. Other researchers started to adopt the technology acceptance model in their research to find out why consumers accept and reject certain information regarding technology.

The technology acceptance model is widely used in perceived ease of use, and perceived usefulness has become most commonly used by the researcher (Legris, 2003). Besides, Davis (1989) mentioned that more external variables have to be defined to explain perceived usefulness and perceived ease of use. After this model's existence, it has been applied to research that has a relation with technology's purpose is to test the behaviour (Lee et al., 2003). Several other studies prove the technology acceptance model appears to be a robust existence model. According to Ingham et al. (2015), TAM influences perceived ease of use and perceived usefulness and a direct and positive predictor of consumer purchase behaviour towards online shopping.

### **PERCEIVED USEFULNESS**

According to Davis (1989), perceived usefulness is the degree to which a consumer believes that using a particular system would improve their task performance. Malhotra and Galletta (1999) defined perceived usefulness as a kind of technological improvement that will benefit the user and increase the user's efficiency and convenience. Besides, Mohd et al. (2011) described perceived usefulness as the prospective users' subjective probability of using a particular system to increase the users' job performance within a specific context. Consumers will consider whether the technology is undoubtedly useful for them in terms of convenience and efficiency or whether the technology is suitable for a single purchase or multiple purchases in the long-term (Sulistiyaningsih et al., 2014).

Perceived usefulness will affect online grocery in terms of consumer behaviour towards using the online grocery system (Kurnia and Chien (2003). According to Cho (2015), online grocery will efficiently save the consumers time in purchasing grocery online because of the convenience and speed that the system provides. Davis (1989) stated that perceived usefulness must affect the usability of the system. If the system is poorly built, it will affect the consumer experience towards online grocery. Tsai (2012) mentioned that behaviour could be the factor that affects perceived usefulness. The system is a factor in improving a useful way for the consumer to operate the system efficiently. The system's performance will positively impact user experience (Wang and Chou, 2014). In contrast to the study done by Alharbi and Drew (2014), job relevance will affect the decision of the user in terms of perceived usefulness. Therefore, the following hypothesis has been developed:

**H1:** There is a positive and significant relationship between perceived usefulness and consumer purchasing behaviour towards online grocery shopping.

### **PERCEIVED EASE OF USE**

Davis (1989) defined that perceived ease of use describes that consumers believe that it will have improved after using a specific type of technology and helped make the process more convenient and effortless. Davis (1989) also discussed that perceived ease of use as "the freedom from difficulty or great effort." Raman (2011) claimed that "effort is an exertion of physical or mental strength to perform an activity." Additionally, Sulistiyaningsih et al. (2014) clarify that perceived ease of use is an improvement where consumers expect online grocery to be easy to operate and handled effortlessly. There is a strong connection that relates perceived ease of use with the technology acceptance model (Alharbi, S. and Drew, S., 2014). A study by Park (2009) stated that the ability to perform a specific task using technology would have a massive impact on consumer perception of perceived ease of use.

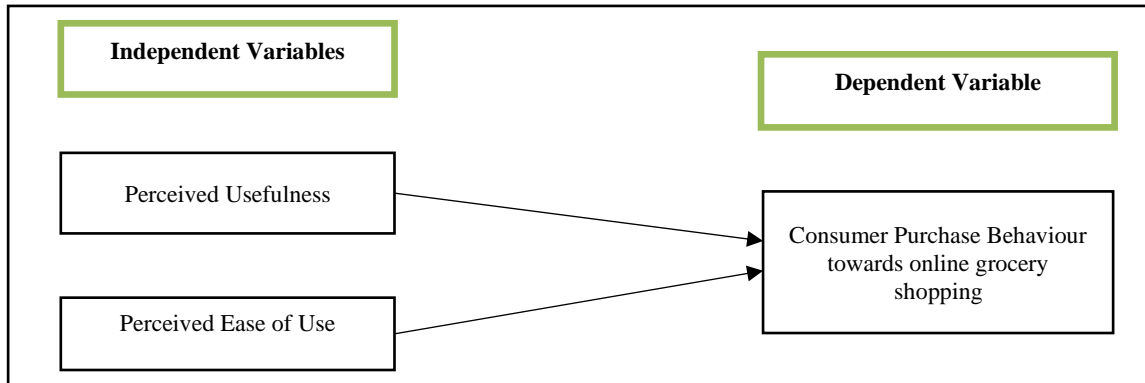
Besides, Mohd et al. (2011) describe that if there is a large amount of information available online regarding ease of use, it might affect the consumer's decision to use the technology. If users believe the technology is beneficial, users might similarly assume that technology is not complicated to use (Davis, 1989). According to Tsai (2012), if the consumer has a more positive perceived ease to use, it is more likely that the behaviour will repeat. If the system appears to be hard to use, the consumer will tend to ignore it because it creates difficulty for them. Wang and Chou (2014) mentioned that new technology should require minimal effort in usability and familiarity with the system to enhance and provide efficiency and good performance. According to Phang (2016), perceived ease of use is a mainstream topic discussed in innovation adoption. Therefore, the following hypothesis has been developed:

**H2:** There is a positive and significant relationship between perceived ease of use and consumer purchasing behaviour towards online grocery shopping.

**RESEARCH FRAMEWORK DEVELOPMENT**

Based on previous literature and studies, a proposed research framework is designed as below. The research framework in Figure 1 has shown the independent variable, which is perceived usefulness and perceived ease of use. The dependent variable is the consumer purchase behaviour towards online grocery shopping.

**Figure 1: Conceptual Framework**



**METHODOLOGY**

This research will use a quantitative method to test the relationship between variables that will affect consumer purchase behaviour towards online grocery shopping. Data collected will be tested and analysed based on the developed hypothesis. The instrument used will be a self-administered survey. The questionnaire survey method was used to collect the primary data and questionnaires adopted from prior researches. The questionnaire will be using Google Form, and the link is distributed through e-mail. The sampling design for this research is targeted at the population with an online grocery shopping experience. Since the study's objective is to examine consumer purchasing behaviour towards online grocery shopping, the respondent must have an online grocery shopping experience. The sampling location for this research will be in Melaka. The questionnaire is distributed to the respondent, which is selected randomly. This research will adopt non-probability sampling because less time will be taken to collect the survey, and it is a cheaper alternative than probability sampling. G Power has been used to calculate the sample size needed in this research, which shows the total sample size in this study will be 156 respondents. In this research, different data analysis methods have been adopted, including Statistical Package for Social Sciences (SPSS), mean and standard deviation analysis, reliability test, validity test through Pearson Correlation test, and multiple regression analysis.

**RESULTS AND FINDINGS**

**MEAN AND STANDARD DEVIATION ANALYSIS**

5 point Likert scale is used in the measurement of the dependent and independent variable, which is count from 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), 5 (strongly agree).

**Table 1: mean and standard deviation analysis for perceived usefulness**

|     | Item   | Mean     | Std. Deviation |
|-----|--|----------|----------------|
| PU1 | Using Online Grocery Shopping can improve my efficiency in purchasing groceries. | 4.5256   | .53820         |
| PU2 | Using Online Grocery Shopping can save me a lot of time.                         | 4.5449   | .53693         |
| PU3 | Using Online Grocery Shopping can make my grocery shopping easier.               | 4.4744   | .55006         |
| PU4 | Using Online Grocery Shopping is convenient for my grocery shopping.             | 4.4872   | .56211         |
|     |  | 4.508025 | 0.546825       |

Table 1 shows the mean and standard deviation for the four items in Perceived Usefulness. The highest value of the mean is PU 2, in which the mean value is 4.5449. The lowest mean is PU 3, in which the mean value is 4.4744. The average mean value for Perceived Usefulness will be 4.508025, which projects that most of the respondents strongly agree with the majority of the item in the independent variable, and the average standard deviation for Perceived Usefulness will be 0.546825.

**Table 2: Mean and Standard Deviation Analysis for Perceived Ease of Use**

|       | Item  | Mean   | Std. Deviation |
|-------|---|--------|----------------|
| PEOU1 | Online Grocery Shopping is/might be easy to use.  | 4.5128 | .53866         |
| PEOU2 | It is/might be easy to become skillful at using Online Grocery Shopping.                  | 4.5449 | .53693         |
| PEOU3 | It is/might be easy for me to follow the procedures when ordering groceries online.       | 4.4615 | .57231         |
| PEOU4 | My interaction with the processes of online grocery is/might be clear and understandable. | 4.4872 | .56211         |
|       |   | 4.5016 | 0.552503       |

Table 2 shows the mean and standard deviation for the four items in Perceived Ease of Use. The highest value of the mean is PEOU 2, in which the mean value is 4.5449. The lowest mean is PEOU 3, in which the mean value is 4.4615. The average mean value for Perceived Ease of Use will be 4.5016, which projects that most of the respondents strongly agree with the independent variable, and the average standard deviation for Perceived Ease of Use will be 0.552503.

**Table 3: Mean and Standard Deviation Analysis for Consumer Purchase Behaviour**

|      | Item  | Mean   | Std. Deviation |
|------|---|--------|----------------|
| CPB1 | I intend to use online grocery when the service becomes widely available. | 4.5256 | .53820         |
| CPB2 | Whenever possible, I intend to use online grocery to purchase groceries.  | 4.5449 | .53693         |
| CPB3 | I intend to use online grocery when there is free home delivery.          | 4.4615 | .57231         |
| CPB4 | I intend to use online grocery when the price is competitive.             | 4.5128 | .56211         |
|      |   | 4.5101 | 0.552388       |

Table 3 shows the mean and standard deviation for the four items in Consumer Purchase Behaviour. The highest value of the mean is CPB 2, in which the mean value is 4.5449. The lowest mean is CPB 3, in which the mean value is 4.4615. The average mean value for Consumer Purchase Behaviour will be 4.5101, which projects that most of the respondents strongly agree with the item in the dependent variable. The average standard deviation for Consumer Purchase Behaviour will be 0.552388.

## RELIABILITY TEST

**Table 4: Reliability Test for the independent variable and dependent variable**

| Variables  | Number of Items | Item Deleted | Cronbach's Alpha $\alpha$ |
|--|-----------------|--------------|---------------------------|
| Perceived Usefulness                               | 4               | -            | 0.836                     |
| Perceived Ease of Use                              | 4               | -            | 0.810                     |
| Consumer Purchase Behaviour Towards Online Grocery | 4               | -            | 0.845                     |

Table 4 shows the result of the Cronbach's Alpha, in which there are two independent variables, Perceived Usefulness and Perceived Ease of Use, and a dependent variable, which is Consumer Purchase Behaviour. The highest Cronbach's Alpha will be the dependent variable Consumer Purchase Behaviour, which is 0.845, which is reliable. The Cronbach's Alpha for Perceived Usefulness will be 0.836, and the Cronbach's Alpha for Perceived Ease of Use will be 0.810, which both are reliable.

## NORMALITY ANALYSIS

**Table 5: Normality Test**

| Variables  | Skewness | Kurtosis |
|--|----------|----------|
| Perceived Usefulness                               | -.076    | -1.603   |
| Perceived Ease of Use                              | -.024    | -1.631   |
| Consumer Purchase Behaviour Towards Online Grocery | -.073    | -1.660   |

The normality test result skewness generated cannot exceed  $\pm 1$ , and the kurtosis result generated cannot exceed  $\pm 3$ . Table 5 projected the normality test result. From the result generated, the skewness for perceived usefulness will be -0.076. The kurtosis will be -1.039, which shows that both of the result generated is in between the range, the skewness for perceived ease of use will be -0.024. The kurtosis will be -1.631, which shows that both of the result generated is in between the range, the skewness for

consumer purchase behaviour will be -0.073. The kurtosis will be -1.660, which shows that both results are in between the range. This indicates that the data collected are well distributed.

**PEARSON CORRELATION ANALYSIS**

**Table 6: Correlation Analysis**

|                             | Perceived Usefulness | Perceived Ease of Use | Consumer Purchase Behaviour |
|-----------------------------|----------------------|-----------------------|-----------------------------|
| Perceived Usefulness        | 1                    | .931**                | .893**                      |
| Perceived Ease of Use       | .931**               | 1                     | .916**                      |
| Consumer Purchase Behaviour | .893**               | .916**                | 1                           |

According to Table 6, the result of Pearson's Correlation measures the strength of linear relationships between the dependent variable and the independent variable. All the independent variables will have the same significant value at the 0.01 level with the dependent variable, Consumer Purchase Behaviour. The variable will be Perceived usefulness and the  $r = 0.893^{**}$ , indicating a very strong relationship with the dependent variable. Perceived Ease of Use variable is  $r = 0.916^{**}$ , which means a very strong relationship with the dependent variable and has the highest R-value.

**MULTIPLE REGRESSION ANALYSIS**

**Table 7: Coefficients<sup>a</sup>**

| Model                 | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|-----------------------|-----------------------------|------------|---------------------------|-------|------|
|                       | B                           | Std. Error | Beta                      |       |      |
| 1 (Constant)          | .053                        | .294       |                           | .181  | .857 |
| Perceived Usefulness  | .290                        | .078       | .285                      | 3.723 | .000 |
| Perceived Ease of Use | .314                        | .100       | .304                      | 3.153 | .002 |

**a. Dependent Variable: "Consumer Purchase Behaviour."**

Table 7 illustrates the result for Coefficients based on the Coefficients table. There are two independent variables, which are Perceived Usefulness and Perceived Ease of Use. The significant level of Perceived Usefulness is 0.000 ( $p < 0.05$ ), and the significant level of Perceived Ease of Use is 0.002 ( $p < 0.05$ ). It has a significant relationship because of the significant value that is less than the p-value of 0.05. There is a significant relationship with the dependent variable Consumer Purchase Behaviour.

**CONCLUSION**

The research has confirmed the hypothesis that there is a significant positive relationship in perceived usefulness and consumer purchase behaviour towards online grocery use as suggested in the technology acceptance model. The value in the coefficient analysis for perceived usefulness is 0.000 ( $p < 0.05$ ). It shows that there is a significant relationship with the consumer purchase behaviour towards online grocery. The  $\beta = 0.285$  shows that the positive relationship between perceived usefulness and consumer purchase behaviour. This proves that hypothesis 1 (H1) is well supported.

The relationship in this TAM hypothesis between perceived usefulness and consumer purchase behaviour can also be supported by the previous studies which confirm that there is a positive relationship between perceived use and consumer purchase behaviour (Kurnia & Chien, 2003; Delafrooz et al., 2009; Suki & Suki, 2011; Raman, 2011; Malhotra & Galleta, 1999; Wang & Chou, 2014). When consumers believe that using online grocery will improve the consumer grocery shopping experience, they will be more willing to use online grocery to make grocery purchases. Therefore, the system must convince the consumers that the system will have many benefits so that consumers will desirability to use online grocery. The item name must be the keywords that can be easily searched and often search by consumers. Shopping grocery online also allows the user to pay through online grocery to provide a time-saving solution. It does not require to queue up for payment like in a traditional grocery store.

The Perceived Ease of Use has a positive relationship with consumer purchase behaviour toward online grocery. In the coefficient, analysis shows that Perceived Ease of Use has a positive relationship with the consumer purchase behaviour toward online grocery because the  $\beta = 0.304$  and the significant level is 0.002 show that there is a significant relationship ( $p < 0.05$ ). Therefore, H2 is supported.

According to the previous study done by Driedigera (2019), the study's findings revealed a positive relationship between Perceived ease of use and consumer purchase behaviour towards online grocery. When users think that the online grocery system can be easy to operate and use and does not need much effort, individuals will have increased intention to use online grocery to purchase their groceries. In addition to that, if the online grocery system is complex and confusing, the consumers will start to lose the intention of the user to use the online grocery system. The online grocery system must be modern, revolutionary, and innovative to attract young users' attention and simple enough for the older user to operate. Thus, it is essential to make sure that the online shopping system is user-friendly to assure that users of all ages can understand and operate without difficulty.

The limitation will be the accuracy of the data collected, in which the questionnaire was not distributed to respondents face to face; instead, it uses online distribution. It will be faster by distributing through online, but the major drawback will be the respondent might not be serious. The result data collected possibly will be biased towards Melaka, Johor, and Kuala Lumpur online grocery shoppers, and it does not represent the entire population in Malaysia. The demographic aspects should take into consideration. But in this study, the demographic data did not use a study relationship between the demographic factor and consumers' purchasing behaviour towards online grocery.

In future research, the researcher should expand the coverage of a larger geographical area in Malaysia. This can help the researcher better understand the behaviour of the individual consumer.

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