

CONSUMERS' ATTITUDE TOWARDS AGRICULTURE PRODUCTS PURCHASED VIA E-COMMERCE PLATFORMS IN SELANGOR

Nur Hazwani Mohammad Azam ¹

Nur Fatin Munirah Aris ²

Nur Erni Syaliza Ahaddon ³

Fazleen Abdul Fatah ⁴

Abdul Rahman Saili ⁵

¹ Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA Malacca, Malaysia
Email: hazwaniazam@uitm.edu.my

² Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA Malacca, Malaysia
Email: fatinmunirah@uitm.edu.my

³ Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA Malacca, Malaysia
Email: ernysyaliza@gmail.com

⁴ Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA Malacca, Malaysia
Email: fazleen5201@uitm.edu.my

⁵ Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA Sarawak, Malaysia
Email: arsaili@uitm.edu.my

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Abstract: *The study was conducted to understand consumer perspectives and acceptance of agriculture products purchased via e-commerce platforms. Three main factors that influence consumer perspective were identified which include perceived risk, consumer trust, and perceived benefit. The results showed that, out of three factors, only two significantly influence attitude towards purchase: perceived benefit and consumer trust. Consequently, attitude significantly influences consumer behaviour in purchasing agriculture products via e-commerce platforms.*

Keywords: *e-commerce, agriculture products, consumers' attitude, purchase decision*

Introduction

In March 2020, Malaysia imposed a movement control order (MCO) to curb the spreading of Covid-19. Almost all economic sectors suffered from adverse impacts from the restriction. The agriculture sector is one of the sectors that was severely incapacitated by the pandemic. The restriction order caused many transportation delays due to roadblocks set up during MCO. Consequently, the supply chain in agriculture was disrupted, and farm goods could not be delivered to consumers on time. Given the perishable nature of agricultural products, these problems lead to the dumping of goods. The lockdown imposed by the government to curb the spread of the virus also caused logistic disruptions, a low supply of agriculture inputs, and also

a lack of human resources. Therefore, all of these have contributed to the decrease in agricultural value (Zhang et al., 2021). Lack of labour has caused a shortage of agriculture key inputs and an inability to fulfil the demand. Disruption in the food supply chain will lead to a more significant issue for the whole population. In addition, the increase of the human population will escalate the demand for food. Ensuring food security is already one of the main issues discussed by the world leader; thus, one of the sustainable development goals set by the United Nations is zero hunger (The 17 goals, 2022).

Food, one of the basic human needs, should supposedly guarantee that the agriculture sector will always be one of the economic sectors that will not lose its value due to the constant demand from consumers. Agriculture supposedly thrives despite the catastrophe, but its outlook is not favourable. To overcome the problem, producers need to find ways to shorten the food supply chain to reduce the impact of logistic disruption. By shortening the food supply chain, the consumers can get their products at the designated time with the best quality, and producers can lessen the repercussions of pandemics to their business. Hence, the use of e-commerce platforms in agriculture, such as Shopee, Happy Fresh, and Food Panda Mart, is viewed as one way to shorten the supply chain. They can connect directly with the consumer and deliver the products promptly using the 'click and deliver' method. It is expected that the initiative will increase product quality and consumer preferences both in the domestic and international markets

Problem Statements

Consumers are less likely to conduct their food shopping in person due to the pandemic, as the fear of being near someone else in the same place may expose them to the virus. People are changing their purchasing behaviour to more online oriented, including food items, as they are less willing to shop in a physical store (Bhatti et al., 2020). Online shopping is already on the rise even before the pandemic, but the surge in the spreading of the virus further increases the usage of e-commerce to replace the traditional brick-and-mortar store (Bhatti et al., 2020). Consumers are demonstrating a change in preference for their purchasing habits by taking more active roles in the buying process. Many external factors are taking place in shaping consumers' behaviour regarding e-commerce. Many studies have identified various factors such as perceived risk (Thomas-Francois & Somogyi, 2021) - (Kamalul et al., 2018), perceive ease of use(Thomas-Francois & Somogyi, 2021)-(Aref & Okasha, 2019), (Oloveze et al., 2021) - (Han & Li, 2020), adoption readiness (Han & Li, 2020), trust (Steyn & Mawela, 2016), (Raman et al., 2019), attitude (Thomas-Francois & Somogyi, 2021), (Wang & Somogyi, 2018), (Oloveze et al., 2021), (Bruwer et al., 2021), (Han et al., 2018) - (Raman et al., 2019), and perceived usefulness (Oloveze et al., 2021) - (Bruwer et al., 2021) as the factors that can influence consumers' intention and online purchase behaviour. However, very little is known about Malaysian consumers' beliefs, motivation, and values surge the behaviour of purchasing agriculture products through e-commerce compared to other countries. From the marketing perspective, it is valuable to determine the main factors contributing to the consumers' perspective and acceptance of fresh agriculture products purchased through the e-commerce platform. Many factors have been linked to low online food buying sales. However, previous studies showed that consumers do not make frequent online grocery purchases. This study is conducted to understand the consumers' perspective and acceptance of fresh agriculture products purchased through e-commerce platforms. The main factors studied in this research are perceived risk, consumer trust, perceived benefit, attitude, and purchase decision.

Literature Review

Agriculture products refer to plants, animals, or products obtained from various agriculture activities. Agriculture product has different characteristics compared to industrial products, and the main one is shelf life. Agriculture products are perishable, meaning that they would not last long, and the products need to be transferred from producers to consumers as fast as possible to ensure their quality. Perishability is one of the disadvantages of agricultural products, making it impossible for farmers to obtain higher profits. The fact that agricultural products are perishable makes it easier for consumers to push the price as low as possible for the products because of the pressure of the farmers to sell their products as soon as possible (Ye & Ma, 2017). Besides, the appearance of intermediaries that absorb most of the profit from selling these products also makes it impossible for the farmers to profit more from their produce (Ye & Ma, 2017). Hence, the usage of e-commerce can help reduce the gap between the producers and consumers and eliminate the need for intermediaries in the transaction, making it profitable to both the producers and consumers.

E-commerce means any transactions of products or services that occur through online methods. Selling goods and services via the internet has been going on for years now, but the use of e-commerce has been on the rise in the agriculture sector mainly due to the pandemic. The number of digital buyers worldwide has increased from 1.32 billion in 2014 to 2.14 billion in 2021 (Coppola, 2014) an increase of 62.1 percent in eight years. Moreover, the sales from retail e-commerce are amount to 4.3 trillion in 2021. This amount is expected to increase by 50 percent to 7.4 trillion in 2025 (Chevalier, 2022). E-commerce plays an essential role in curbing the spread of the pandemic and to make sure there is a continuous supply of food. Furthermore, the risk of cross-infection can be reduced, and the demand for food can be fulfilled through e-commerce, especially during the pandemic (Guo et al., 2020). Consumers are more interested in shifting to the digitisation of transactions, especially after the Covid-19 pandemic, making them more inclined to choose e-commerce as a platform to fulfil their needs (Dvorak et al., 2021). During a pandemic, the food consumption patterns change to fresh fruits and vegetables and animal products (GÃ¼ney et al., 2021). It also shows that during the pandemic, there is an increasing trend of consuming more fresh food such as vegetables and fruits (Bhatti et al., 2020), (Ben et al., 2020). Consumers and marketers also show a positive attitude toward shifting from traditional marketing to digital platforms, beneficial to the parties involved (Sheth et al., 2021).

Risk is associated with the possibility of losing or exposing something to danger. Perceived risk is the feeling of uncertainty that comes with the purchase decision. The higher the perceived risk, the lower the consumers' engagement in their purchasing decision when using online platforms (Aref & Okasha, 2019). Risk also has been found significantly moderated the consumers' behaviour while purchasing online (Rejikumar & Aswathy, 2020). Whilst risk can occur in any online or offline transaction, the consumer perceived higher risk in the online setting (Wu et al., 2020). Therefore, this hypothesis examines the relationship between perceived risk and attitude towards using e-commerce.

H1: There is a positive relationship between perceived risk and attitude towards using e-commerce to purchase agriculture products.

Trust is the foundation of every transaction, be it offline or online. Past studies show trust forms the basics of e-commerce, (Steyn & Mawela, 2016). It also had positively influenced the behaviour of consumers to purchase online (Raman et al., 2019); (Santo et al., 2021), (Rahman

et al., 2018). Trust is also significantly influenced repurchase intention using e-commerce (Miao et al., 2021) - (Trivedi et al., 2018). Thus, the second hypothesis is proposed as:

H2: There is a positive relationship between consumers' trust and attitude towards using e-commerce to purchase agriculture products.

One of the main reasons for the increasing popularity of online shopping is the advantages that come with it. Time-saving (Shukla et al., 2021), ease of comparison of price and products (Raman et al., 2019), price competitiveness (Kamalul et al., 2018), and convenience (Rahman et al., 2018); (Shukla et al., 2021), variety of products (Arora et al., 2018), are among the benefits of online shopping . Perceived benefit is the belief in a positive outcome of specific behaviour. Since the perceived benefit is one of the motivators that can affect the attitude, the third hypothesis is postulated as:

H3: There is a positive relationship between perceived benefit and attitude towards using e-commerce to purchase agriculture products.

Attitude is formed based on one's motives (Ajzen, 1991). It differs from one person to another as different people can form a different attitude towards the same thing. Different consumer forms the same attitude toward the product, but the attitude itself serves as a different function according to the person himself. A study by Lee et al., indicated that attitude directs the actual behaviour (Lee et al., 2019). The more positive the attitude, the higher the chances of it translating into actual behaviour. The previous statement is in line with the result that found out that the consumer who has a more positive attitude towards buying online also shows positive purchase intention (Han et al., 2018); (Raman et al., 2019); (Rahman et al., 2018) Hence, the following hypothesis is derived:

H4: There is a positive relationship between attitude towards using e-commerce to purchase agriculture products and purchase decisions.

Conceptual Framework

The theory of planned behaviour is considered the most established and well-known theory for behavioural study, including understanding consumer behaviour towards engagement of specific desired action. The theory of planned behaviour is rooted in the theory of reasoned action. Attitude and subjective norm are the main predictors that will influence the intention and then translate into actual behaviour in the theory of reasoned action. In contrast, the theory of planned behaviour added perceived behavioural control as one of the variables that will influence the intention.

In this study, the framework's focus is attitude and its relationship to actual behaviour. In online shopping studies, perceived risk (Kamalul et al., 2018), trust (Rahman et al., 2018), and perceived benefit (Raman et al., 2019); (Arora et al., 2018) are among the common factors that scholars studied to understand further the consumers' behaviour towards e-commerce. Figure 1 shows the conceptual framework derived from one element of the theory of planned behaviour used to conduct the study.

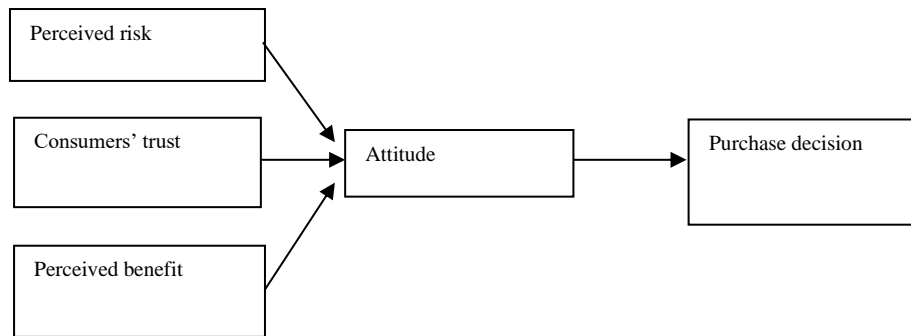


Figure 1: Conceptual framework

Methodology

A convenience sampling method is used to conduct the study—104 respondents were chosen from the population of 2,204. The data were obtained by distributing questionnaires through online mediums such as WhatsApp, email, and google form to Sg. Rambai residents. Online methods were chosen due to the restriction of movement imposed by the government. The same distribution of survey method is also used by other scholars within the same field of study (Raman et al., 2019), (Oloveze et al., 2021), (Ben et al., 2020).

This study only focuses on fresh agriculture products. The questionnaire had four sections. Section A consisted of demographic profiles such as gender, level of education, profession, status, and age. Section B comprises seven items explaining the purchase pattern of the consumers. Section C contained 26 items covering all independent variables: perceived risk, consumer trust, and perceived benefit. The five-point Likert scale is used for all 26 items, with one indicating 'strongly disagree' and five indicating 'strongly agree'. Lastly, Section D explores the decision of the consumer to purchase fresh agriculture products via e-commerce platforms.

Data Analysis

In this study, SPSS software was used to analyse the data collected. First, descriptive analysis was conducted on items in Sections A and B to explore, summarise and describe the data collected. The analysis provided general observation about the data collected, for example, the number of males and females, the age range, the education level, the monthly income, the preferred online platform, the purchase frequency, the amount of money spent, and others. Multiple regression and correlation were used to test the hypotheses.

Fifty-six percent of the respondents are female, while forty-four percent are male. The majority of the respondents come from the 20-29 age group (57%) and the least is from the 50-59 age group (6%). Respondents involved in this study are highly educated, with forty-seven percent had diploma qualification followed by those who had degree qualification (33%). Most of the respondents earn less than RM2,000 with 62.5 percent, 30.8 percent earn around RM2,000 – RM4,000, and 6.7 percent earn more than RM4,000 per month. Most respondents used Shopee as their primary choice of e-commerce platform to purchase fresh agriculture products with 46.1 percent, and the least used platform is Happy Fresh with 4.2 percent. The majority of the respondents spend around RM50 to RM100 on online shopping, with 54.8 percent. The highest purchase frequency through e-commerce is 1 to 2 times with 72.1 percent.

Descriptive analysis is also conducted for items in Section C and D that cover all variables in this study. Based on the descriptive analysis conducted, the respondents show a relatively

positive attitude towards online shopping with a mean of 3.93. For items in perceived risk, the majority of the respondents agree that there are many risks such as low quality of products, unauthorised use of personal information, and the lack of ability to examine the products, with a mean of 3.81. The respondents in this study are undecided towards trust factor in online shopping as the majority of them are neither agree nor disagree that online shopping can be trusted as a platform in which they can do their shopping with a mean of 3.46. As for perceived benefit, the respondents agree that by using e-commerce platforms, they can easily shop with ease, avoid parking, and the hassle of regular shopping, and save time and money with a mean of 4.12.

A reliability test is conducted to measure the instrument's consistency and stability, and it helps determine the measure's quality.

Table 1: Reliability Test Of Variables

Variables	Cronbach's alpha value
Perceived risk	0.761
Consumers' trust	0.883
Perceived benefit	0.860
Attitude	0.938
Purchase decision	0.732

A reliability test was conducted on all 30 items, and all items showed high alpha values with a minimum value of 0.732. Therefore, All items show high internal consistency and are suitable for this study.

Next, multiple regressions were conducted to determine the relationship among the variables. In this study, the regression analyses the relationship between attitude (dependent variable) with perceived risk, consumers' trust, and perceived benefit (independent variables). Table 2 below shows that out of the three factors representing consumer perspective, perceived risk, consumer trust, and perceived benefit, only two, namely consumer trust and perceived benefit, are found significant.

Table 2: Results of Coefficients

Variable	Standardized Coefficients		
	Beta	t	Sig.
(Constant)		1.151	.252
Perceived risk	-.030	-.465	.643
Consumers' trust	.257	3.807	.000
Perceived benefit	.659	9.251	.000

a. Dependent Variable: Attitude towards using e-commerce

Perceived risk is not significant in this model. The t- value for perceived risk is negative. It shows that the higher the risk perceived by the consumer, the less likely he/she will have a positive attitude towards purchasing agriculture products via e-commerce, albeit it is not significant. Perceived benefit and consumer trust show a solid significant level of 0.000 ($p < 0.05$). Consumers' trust shows a beta coefficient of 0.257. Respondents' attitudes will increase 0.257 units for every 1 unit increase in consumer trust. Perceived benefit shows the

highest beta coefficient among the two significant factors with 0.659. The respondent's attitude will likely be more positive with each increase in the perceived benefit of online shopping. The consumer's acceptance of purchasing fresh agriculture products through e-commerce is shown by the relationship of attitude and purchase decision. Correlation is conducted to show the relationship between the two variables and how strong is the link between the two.

Table 3: Results of Correlations

		Attitude	Purchase decision
Attitude	Pearson Correlation	1	.531**
	Sig. (2-tailed)		.000
	N	104	104
Purchase decision	Pearson Correlation	.531**	1
	Sig. (2-tailed)	.000	
	N	104	104

** . Correlation is significant at the 0.01 level (2-tailed)

Based on the result in Table 3, attitude is found significantly related to purchase decisions at a significant level of .000 ($p < 0.01$). The correlation coefficient between attitude and purchase decision is 0.531. The result shows a somewhat moderate relationship between the two.

Discussion

Based on the results above, H2, H3, and H4 are accepted, while H1 is rejected. The results show that the respondents' perspective and acceptance of purchasing fresh agriculture products through e-commerce is positive. The respondents placed perceived benefit as the main factor influencing them to use an e-commerce platform to purchase their agriculture products. Although the perceived risk is not significantly related to the attitude of the respondents, the negative beta coefficient shows that the higher the perceived risk that the respondents have to face regarding using e-commerce platforms, the less positive their attitude will be towards purchasing fresh agriculture products through e-commerce platforms. Even though certain risks concern the respondents about using e-commerce platforms for their purchase, the benefits that come with the usage of the platforms outweigh the risks. Thus, the respondents' attitude is positive.

Perceived risk is found not significant towards consumers' attitude towards online shopping. This result is supported by the result that shows similar findings among consumers in China (Wang & Somogyi, 2018). Perceived risk is not significant because most consumers believe online transactions are now much safer due to the increasing trend of online shopping, making the apps or online platforms more reliable and trustworthy. This finding aligns with the result that perceived risk negatively influenced agricultural products' online purchase intention (Zhao et al., 2017). Another study conducted among female shoppers also obtained similar results showing that the perceived risk is negative but non-significant in terms of its relationship towards purchase intention (Shukla et al., 2021). When they are trying to engage in online purchasing and security risk, consumer perceived risk is the main barrier that hinders the consumers from performing such behaviour, while the social risk is insignificant (Kamalul et al., 2018).

Consumers' attitude has a significant relationship with purchase decisions. This finding corroborates other studies (Thomas-Francois & Somogyi, 2021), (Tariq et al., 2019) that found similar results. The relationship between consumers' attitude and purchase decision is supported

by the results that found a direct relationship between attitude and intention to use online platforms (Oloveze et al., 2021). Attitude is the main factor that shapes consumers' intention (Singh et al., 2020) because consumers' attitudes positively influence online purchasing intention (Raman et al., 2019). Moreover, this was also shown in other studies involving an international e-commerce platform where positive consumers' attitudes translate into purchasing intention (Han et al., 2018).

Trust is also significantly influenced attitude. Producers can adopt social commerce to improve online and offline trust (Ji et al., 2020). In another study, it was found that trust did not influence purchase intention, but it indirectly influenced purchase intention through attitude among female consumers (Raman et al., 2019). Another study conducted to understand the effect of trust on the online shopping attitude of female shoppers also shows the same result (Raman et al., 2019). Indisputably, trust has been one of the main factors that other researchers have focused on in online shopping behavioural study. Reliability and trustworthiness of the producers and the online platform have been identified as the main elements in increasing the consumers' trust to purchase online (Raman et al., 2019).

Perceived benefit is found to significantly influence consumers' attitudes regarding the usage of e-commerce in purchasing fresh agriculture products. The usefulness of online platforms governs the positive attitude of consumers (Oloveze et al., 2021). Consumers are indeed motivated by the advantages of online shopping (Arora et al., 2018). Besides, the ability to compare many products at once without physically going to the store is also one of the main contributors to perceived benefit that positively influenced consumers' attitude towards online shopping (Raman et al., 2019). The saving in terms of price and variety of product selection is among the benefits gained from online shopping (Shukla et al., 2021) - (Arora et al., 2018). Perceived benefit and consumers' trust are the main determinants influencing attitude towards purchasing fresh agriculture products through the e-commerce platform. This positive attitude then positively translates into the purchase decision of the consumers.

Conclusions

The increasing trend of online purchasing has been beneficial to both producers and consumers alike. The increase in internet security helps govern consumers' attitudes towards online shopping. It helps to mitigate the risks that come with online transactions. This study shows that perceived risk is still one of the barriers that impedes consumers' engagement in online shopping, especially in agricultural products, but its effect is not significant. The benefits of e-commerce are more substantial than the perceived risk in utilising online platforms, and consumers trust towards online platforms. Hence, producers and marketers should fully utilise e-commerce as the leading platform to conduct the transaction to replace the conventional method slowly. Producers and marketers can take advantage of the positive attitude the consumer has shown towards e-commerce to fully utilise it in their business to fully reap the benefits of e-commerce.

Limitations

This study has several limitations. First, the result of this study is only limited to the consumers in the Selangor area, particularly in Sg. Rambai. Therefore, the same study needs to be conducted in other areas to give an overall understanding and clearer picture of Malaysian consumer behaviour towards fresh agriculture products purchased via e-commerce. Second, this study only examines certain variables: perceived risk, consumers' trust, and perceived behaviour to understand the consumers' attitude towards e-commerce. Since other variables can

contribute to understanding consumers' attitudes, such as socioeconomic factors and personal factors, other studies should include these variables to fully understand consumers' behaviour.

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