

FROM FARM TO CLICK: UNDERSTANDING CONSUMER MOTIVATION FOR BUYING AGRICULTURAL PRODUCTS ONLINE

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Article history

Received date : 13-1-2026

Revised date : 15-1-2026

Accepted date : 8-3-2026

Published date : 12-3-2026

To cite this document:

Norafindy, S.N.A.M, Musa, M., & Ahmad, Z. (2026). From farm to click: Understanding consumer motivation for buying agricultural products online. *International Journal of Accounting, Finance and Business (IJAFB)*, 11 (64), 54 - 70.

Abstract: *In the post-COVID-19 pandemic era, the global surge in internet users has underscored the internet's pivotal role in accelerating digitalisation across various societal domains, significantly altering consumer purchasing behaviours with a pronounced shift towards online-oriented activities, including the agricultural industry. This study aims to identify the factors that motivate consumers to purchase agricultural products via online platforms among UiTM Perlis staff. Convenience sampling has been employed to gather information from a consumer who has experience purchasing agricultural products through online platforms. A set of questionnaires was developed in Google Forms. It has then been distributed via online platforms and direct surveys to the targeted respondents. A total of 159 respondents have returned the questionnaire and have proceeded to data analysis. A multiple regression analysis has been applied to measure the significance of independent variables (availability of information, quality, price and perceived risk) toward the dependent variable (consumers' preferences to purchase agricultural produce and products via online platforms). The findings of the study reveal that the availability of information and price factors show a positive and significant influence on consumers' preferences to purchase agricultural produce and products via online platforms. While the other two factors, namely quality and perceived risk, were insignificantly influencing consumers' preferences to purchase agricultural produce and products via online platforms. Sellers and related agencies such as the Malaysian Communications and Multimedia Commission (MCMC) are encouraged to go beyond these factors, employing diverse strategies to build trust and convince consumers to purchase online.*

Keywords: *Agricultural product, online buying, quality, price, perceived risk, information availability*

Introduction

The COVID-19 pandemic has greatly accelerated digital transformation across the globe. A total of 41 billion users on the internet worldwide in 2019 increased by 8 million from 2019 to 2022. This trend is driven, in part, by the fact that more people now have access to remote working from home, attending school online, and using e-commerce sites (International Telecommunication Union, ITU, 2021). Similarly, Malaysia has seen continuous growth in Internet usage since 2012. According to the Malaysian Communications and Multimedia Commission (MCMC, 2022), there was a 28.6% increase (64.1% to 92.7%) between 2012 and 2022, which indicates that there has been a significant shift towards digital forms of interaction in people's daily lives and work-related activities (see Figure 1). Furthermore, the increase in Internet usage has been particularly substantial since March 2020 when the government restricted people's ability to move freely throughout Malaysia, thus making them reliant on online means of communication.

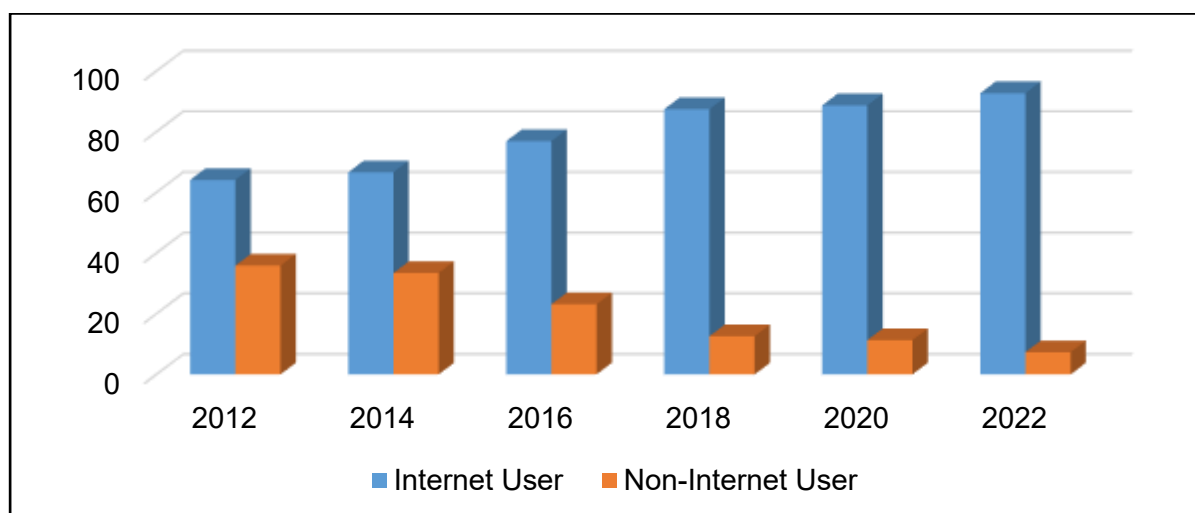


Figure 1: Internet Users and Non-Internet Users Over the Years, 2012-2022

Source: Malaysia Communications and Multimedia Commission (MCMC), 2022

As internet access has increased, the behaviour of consumers has changed significantly in favour of using the internet to shop. Consumers under the age of 40, particularly those aged 20–39, are more prone to buying things online than older demographics. According to Safari and Mahnoon (2016), 45.9% of 30 to 39-year-olds buy fresh agro-products online, 24.6% of those consumers buy fresh agro-products online several times per month and 14.8% of those consumers buy this product at least once per month, as summarized in Table 1). For ages 20 to 29, those numbers are much lower with only 28.7% of consumers purchasing products online, with 13.9% and 12.3% of that demographic respectively purchasing several times a month and at least once per month online. Even in the case of older consumers, i.e., baby boomers, 13.9% of consumers in that demographic register that they purchase products online, indicating that age is not a demon of sorts for agricultural product purchases via the internet. Participation for consumers under the age of 19 is the lowest at 2.5% and likely due to parents being responsible for purchasing decisions for juveniles.

Table 1: Average Purchase Frequency of Fresh Agricultural Products via e-Commerce

Age	Everyday	Several Times a week	Once a week	Several Times a month	Once a month	Total
< 19 years	0	0	0	0.9	1.6	2.5
20 – 29 years	0	0.8	1.7	12.3	13.9	28.7
30 – 39 years	0.8	0	24.6	24.6	14.8	45.9
40 – 49 years	0	0.8	3.3	3.3	4.1	9
50 years	0	0.8	4.1	4.1	8.2	13.9
Frequency	0.8	2.5	45.1	45.1	42.6	100

Source: Safari & Mahnoon (2016)

The rapid growth of e-commerce has made it easier than ever to purchase a diverse variety of agricultural products. The main sources of agricultural E-commerce in Malaysia are Shopee.com.my, Lazada.com.my, and Mudah.my; the largest of these platforms, Shopee, has had the highest website traffic among them since the first week of November 2023 (Similarweb, 2023). As a result of its efforts, the Malaysian Federal Agricultural Marketing Authority (FAMA) has created AgroBazaar.com.my to allow the 8,906 agropreneurs currently registered with FAMA to sell 7,823 agricultural products via “click-and-deliver” services, thereby increasing access to fresh produce in the market (Economic Planning Unit [EPU], 2021). Of the agricultural products purchased via e-commerce in Malaysia, the most dispensed are meat and meat products (21%), vegetables and eggs (19.7% each), fish and seafood (17.3%), fruits (15.3%), and flour (11.7%) (Safari & Masdek, 2020). Collectively, these forms of E-commerce have made it more convenient for consumers to buy agricultural products, thereby increasing the efficiency of time, form, place, and possession utility for consumers.

While the above developments have advanced the online agriculture industry, there are still several barriers to consumer motivation for purchasing agricultural products through online channels. The four most frequently identified features/characteristics of consumer-driven motivation to make online agricultural purchases are: Perceived Product Quality, Price Sensitivity, Perceived Risk, and the Availability of Quality Product Information. The importance of product quality (e.g., product freshness, how accurate are measured, and nutritional value) has a significant effect on increasing trust towards products as well as a willingness to purchase from a retailer (Zuo & Gou, 2023). Price sensitivity; consumers are more likely to make repeated purchases when they find lower prices than they would have purchased offline, as well as discounts and promotions (Safari & Mahnoon, 2016; Liu et al., 2018; Wenyi, 2020). Perceived risk (e.g. concerns about financial security, product authenticity, and delivery reliability) can influence consumers’ willingness to buy products online, but this can vary depending on the situation or context (Geetha et al., 2021; Wu & Liu, 2016). The availability of high-quality, timely, and accurate product information reduces uncertainty associated with products and increases the likelihood of making rational purchase decisions (Zhuang, 2018; Novioleta & Slamet, 2020).

According to the Theory of Planned Behaviour (TPB) (Ajzen, 1991), the three determinant constructs of the TPB, attitudes toward the behaviour, subjective norms, and perceived behavioural control, together influence behavioural intention. Perceived product quality, price perception, and availability of information are considered as attitudinal and control constructs which impact the motivation to purchase agricultural products on the internet. In contrast, perceived risk may moderate the perceived control of consumers and, therefore, the level of

purchase intention. TPB represents a theoretical framework for integrating these constructs together in order to better understand the means by which consumers' beliefs and perceptions influence their online purchasing behaviour.

Although the previous research literature has attempted to investigate individual constructs which have been proposed to influence the online purchase of agricultural products, little research has been conducted which has integrated these constructs into one coherent framework. Additionally, the mixed results of the effects of perceived risk and information availability highlight the potential need for more context-specific investigations. As a means of addressing these knowledge gaps, this study will examine the influence of the constructs of perceived quality, perceived price, perceived risk, and perceived information availability collectively on the motivation to purchase agricultural products over the internet by UiTM Perlis staff, as well as provide valuable theoretical and practical implications for the agri-food e-commerce sector.

Literature Review

Consumers' Decision to Purchase Online

A consumer's purchasing decision (Khaniwale, 2015) represents how an individual evaluates their choices and then selects a product that meets his or her needs through a cognitive process. This process involves how digital interfaces mediate the evaluation of how consumers make purchase decisions online. For example, in the case of online shopping, there is an increase of information asymmetry and a reduced ability to use sensory verification.

According to Han, Vivian and Chenhao (2021), the online decision-making process comprises three phases: information search, alternative evaluation and transaction completion. Online shoppers rely on mediated cues or indicators such as product descriptions and ratings, as well as consumer reviews by other users, to help them choose what to purchase. As a result, online consumer behaviour relates not only to utilitarian factors but also psychological factors, perceived uncertainty and digital trust mechanisms in making purchasing decisions. In purchasing agricultural products, however, the impact of these factors is exacerbated due to the perishable nature of the agricultural products and their high level of sensitivity to freshness will further increase the perceived level of vulnerability of online consumers.

Factors Influencing Consumers' Preferences to Purchase Online

Many factors influence consumers' decisions to purchase online for agricultural produce and products. It can be internal or external factors. An internal factor is the individual's personal attitude towards technology, including their familiarity with using online platforms for purchasing. Consumers' motivation, attitude, and age are examples of internal factors. Consumers purchase products based on various factors, such as requirements, preferences, and purchasing ability. According to Zeidner, Boekaerts and Pintrich (2000) defined motivation as an individual's internal drive or desire to engage in a particular behavior or activity. It is the psychological process that initiates, guides and maintains goal-oriented actions. A consumer's attitude can shape preferences for various reasons, including their past purchases and a sense of fulfilment from the products they purchase (Fauzi, Rahayu & Handayani, 2022).

Next, an external factor is an outside factor that impacts individual decisions and behaviour. Lifestyle and income are examples of the external factors that impact purchasing decisions on agricultural produce and what they decide to purchase (Suntharalingam, Rathakrishnan &

Safari, 2021). Consumer motives vary greatly in the digital realm, ranging from the desire for convenience to the fulfilment of certain lifestyle ambitions. Moreover, income levels exert a significant impact on online buying behaviour. Higher-income consumers tend to possess greater purchasing power, enabling them to afford and prioritise high-quality products and services. Consumers with lower incomes may prioritise affordability, demonstrating increased price sensitivity in their online purchasing decisions. Lifestyle factors have a significant impact on customer behaviour in the online marketplace. The products and services that individuals look for online are greatly influenced by their lifestyle, whether it is an active pursuit of fitness or a preference for durability and practicality. Although many factors might influence consumers to purchase, this study highlighted the quality, price, perceived risk and availability of information to estimate the impacts on the consumer's preference to purchase agricultural produce and products via online platforms.

Perceive Quality

Product quality can be defined as the characteristic of a product or service that depends on its ability to satisfy stated or implied customer needs (Kotler & Armstrong, 2014). Meanwhile, based on Anggraeni and Soliha (2020), the quality of goods refers to the value that customers place on them. Therefore, if a seller's service or product meets or exceeds the customer's expectations, it can be concluded that the seller has provided a high-quality product. In a previous study by Zuo and Gou (2023) on the factors influencing consumers' inclination to purchase agricultural produce and products online, they employed text-mining techniques to analyze a substantial dataset comprising 5958 online reviews from the Tmall Fresh Channel in China. They employed a multiple linear regression analysis to explore the primary factors impacting consumers' intentions to purchase agricultural produce and products through online platforms. A finding of the study shows that a positive correlation was observed between product quality and consumers' intention to purchase agricultural produce online. Firstly, the freshness of these products significantly and positively impacted consumers' online purchase intention. Freshness plays a crucial role in shaping consumers' initial impressions and overall evaluation of the online shopping experience. Secondly, the portion size of agricultural produce and products had a significant and positive influence on consumers' online purchase intention. Accurate portion sizes enhanced trustworthiness, thereby increasing consumers' willingness to make online purchases. Thirdly, the nutritional value of agricultural produce significantly and positively affected consumers' online purchase intention.

Perceived Price

Price is a key factor that influences buyers' intentions to make online purchases. Price can be defined as the nominal amount of money required to receive a product or service or as the value that customers must exchange to use and benefit from a good or service. Price is a payment requirement for products based on consumers' ability to pay for them (Djatkiko & Pradana, 2016). Research on the perceptions and inclinations of consumers towards the purchase of fresh agricultural produce via e-business has been conducted through an electronic web-based survey in Malaysia by Safari and Mahnoon (2016). Results of the analysis reveal that the willingness factors of online shopping in their study are led by price factors. Price was cited by 17.7% of consumers, as an important influence in their decision to shop for fresh agricultural produce online. This component was also dependent on the available promotions. The greater the price discount of agricultural produce and products, the higher the consumer's willingness to make a purchase (Liu et al., 2018). Even though the produce came from the same seller, there were sometimes differences in the selling prices in physical stores and online. Meanwhile, in China, Wenyi (2020) employed research to identify the factors affecting consumers' purchase of

agricultural products online behavior. A set of 640 questionnaires was distributed to the consumers, and 462 sets were valid to proceed with data analysis. Results of the analysis show that the low price of agricultural products sold online is among the top five characteristics through which these products are purchased through ecommerce platforms. The lower price offered for the items in the online platform makes consumers willing and prefer to shop online. Similar findings were also reported by Putra et al (2024) where price had a significant positive effect on purchasing decisions on the Shopee Marketplace.

Perceive Risk

Perceived risk is described as the extent to which individuals are afraid because they feel threatened by an ambiguous situation. In an online transaction, consumer perceived risk can be defined as a customer's belief about the potential unfavourable implications of her/his decision to shop online (Safari & Ngusman, 2020). Risk has also been proven to considerably modify consumers' behaviour when purchasing online. While risk can arise in any online or offline transaction, the consumer perceives increased risk in the online situation (Rejikumar & Asokan, 2020). Geetha et al. (2021) conducted a study examining the perceived risks influencing consumers' intention to engage in online purchases in East Malaysia. The findings revealed a negative correlation between security risk and the intention to make online purchases. Online shoppers in East Malaysia expressed concerns that inadequate website security might result in the unauthorised disclosure and misuse of their personal data, such as contact numbers and financial information, including credit/debit card details. Furthermore, there was apprehension that poor website security could lead to online sellers providing inaccurate product information and background details, ultimately eroding trust in the online shopping experience. On the contrary, Wu and Liu (2016) in their study reveal that perceived risk has a negative effect on attitudes toward purchasing fresh agricultural products through online shopping, however, it was not significant. Their study shows that the consumers who perceived high risk in online shopping would have a negative attitude toward purchasing fresh agricultural products online, but the effect is not significant. The risk includes perceived financial risk and perceived product risk. Perceived delivery risk and perceived info security risk.

Perceived Information Availability

E-commerce provides an excellent platform for selling agricultural produce and products online, making it easy access to information. Availability of information refers to the ease with which individuals can access details about the products through online platforms. Lack of information and information asymmetry will make it difficult for consumers to purchase agricultural produce online. E-commerce sites offer professional, high-quality and rich information that will assist consumers in making decisions. Consumers' perception of the richness of content provided by the website may be a significant influence on consumers' willingness to purchase (Liu et al., 2018). Zhuang (2018) conducted a study on the influencing factors of consumers' fresh agricultural products purchase behaviour in China. The results revealed a fitting value between information quality towards purchasing behaviour of consumer fresh agricultural products. The online consumers in China stated that the commodity information provided through the website including the date of production and so on, is true and reliable, and the website is always updated, thus promoting consumers' purchase behaviour of fresh agricultural products online. However, the findings of the current study by Novialeta and Slamet (2020) in the effect of security, information availability, delivery, quality, price and time on consumer satisfaction in online purchases reveal that the availability of information has a minimal impact on consumer satisfaction in online purchases. The information offered by online sellers is considered as insufficient in terms of creating satisfaction since it frequently

includes the seller's perspective and lacks the actual experience of directly seeing and touching the product, so fails to match the consumer's expectations.

Application of the Theory of Planned Behaviour

The basis for this study is the Theory of Planned Behaviour where according to this theory, an individual's intention to perform a certain behaviour is based on three factors: their attitude toward the behaviour, their subjective norm (what others think) and their perceived behavioural control (perceived ability to carry out the behaviour).

The three variables of product quality, price and access to information that influence consumers' evaluation of the attitude toward purchasing food and non-food agricultural commodities via the internet can be viewed as belief-based antecedents which create positive attitudes toward each of these three variables hence encouraging a consumer to develop an intention to purchase agricultural products online.

Perceived risk is an attitudinal inhibitor to engage in the behaviour as well as satisfying the consumer's perceived behavioural control. A higher level of perceived risk related to freshness, delivery and payment security may create a negative evaluation of the product thus decreasing the consumer's confidence in completing the transaction. The effect of perceived behavioural control can be heightened due to the implications of risk in the case of perishable agricultural products.

By incorporating the above cognitive evaluations and levels of uncertainty into the Theory of Planned Behaviour, the study offers more than just a descriptive listing of factors that may influence consumers' decisions to purchase agricultural products from online consumers, but rather an organised behavioural explanation as to how those cognitive evaluations and levels of uncertainty are transformed into motivation to purchase via the internet.

Research Gap

Many factors can influence how much people make purchases through the Internet, including how they perceive things and how much concern they have regarding potential risks. Most researchers have focused on several variables (ease of access to information, perceived product quality, consumer attitudes towards prices, and perceived levels of risk) as they relate to consumers' decision-making processes when purchasing agricultural products via electronic commerce. The reason these four variables are important for online buying is that agricultural products differ from other types of commodities, such as non-food items, with respect to their short shelf-life, the role of quality, and relative uncertainty about the products to be purchased.

The theoretical and empirical justification for selecting the above variables in this study is as follows: the presence/availability of information; the perceived quality of a product; and price/consumer perceptions of price all combine to create customer perceptions of online purchasing; however, perceived risk is considered to impede online purchases. According to the Theory of Planned Behaviour, the four variables above can affect customers' attitudes and perceived control, which in turn will affect customers' preferences and intentions to purchase agricultural products online. Thus, assessing the above variables within the institutional context of UiTM Perlis will provide not only theoretical insight but will also provide practical insights into the development of agri-food E-Commerce.

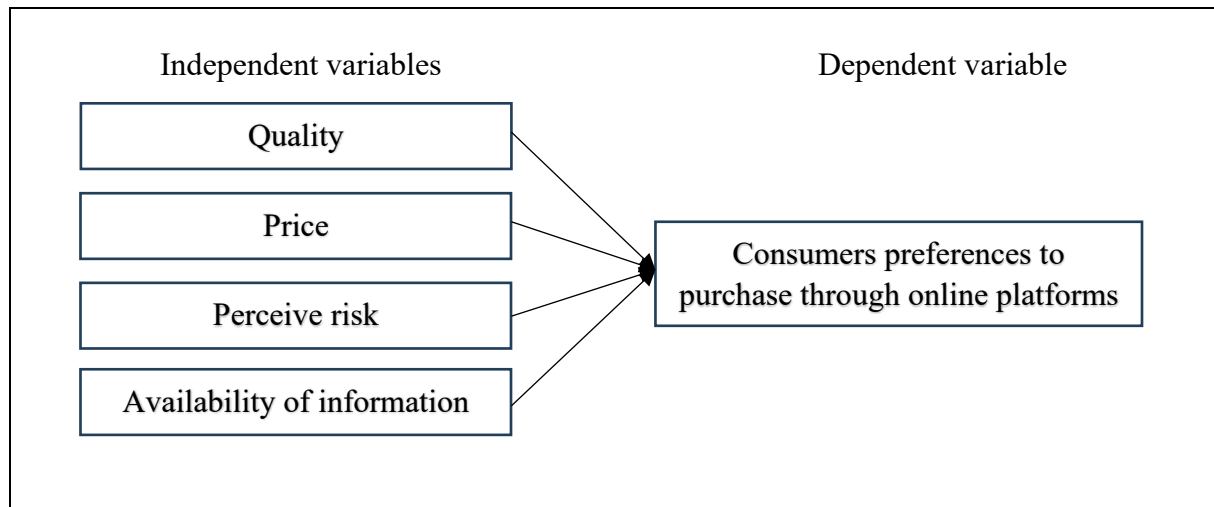


Figure 2: Framework of the Study

Methodology

Survey methods were used to gather the data and information. The study was conducted in Arau, Perlis, and the sampling method employed is convenience sampling. This method was employed due to the time constraints in conducting this research. It allows the researchers to collect data in a short amount of time, at a low cost, and easily conduct. All staff, including the academic and administrative staff, were chosen to be the respondents in the study, and their participation was based on their experience of purchasing agricultural products and produce via online platforms. A sample size has been determined by using the G-Power software, and the suggested minimum sample size is 85 respondents. The structured questionnaire has been used to collect data from the respondents, consisting of four (4) sections. The questionnaire was distributed online and manually passed to the targeted respondents. The distribution of a hardcopy set of questionnaires was done manually by going door-to-door and either asking staff to fill them out right away or collecting the answered questionnaires after 1-2 days.

Data Analysis and Discussion

A Statistical Package for Social Science (SPSS) was utilised to perform a thorough analysis of the obtained and completed dataset. A Reliability Test, Descriptive Analysis, Pearson Correlation Analysis and Multiple Regression Analysis are the data analyses employed in the study.

Reliability Test

Reliability refers to determining how consistently it provides results. In this study, the Cronbach alpha coefficient was employed as a measure of an item's internal consistency. It assists in evaluating the strength of the relationship between each item. As stated by Hair et al., (2013), the Rule of Thumb for reliability analysis shows that a value of less than 0.50 is considered unacceptable, 0.50 to 0.60 is poor, 0.60 to 0.70 is acceptable, 0.70 to 0.80 is good, and a value greater than 0.90 is excellent, indicating stronger internal reliability. A value close to 1 suggests that the questionnaire is suitable for future use. This analysis helps ensure the reliability and consistency of the questionnaire in measuring the intended constructs. The reliability test for this study was performed on the pilot study data, and the results are displayed in Table 3. All variables have Cronbach's alpha values of 0.7 and higher, showing high internal consistency and dependability across all of them. The research showed that each of the variables evaluated

demonstrated consistent and reliable patterns. This established the questionnaire's usability and reliability as a research instrument.

Table 3: Reliability Analysis

No.	Variables	No. of items	Cronbach's Alpha
1	Consumer motivation for purchasing Agricultural product via online platform (DV)	3	0.899
2	Quality	4	0.948
3	Price	5	0.901
4	Perceived risk	5	0.955
5	Availability of information	7	0.914

Descriptive Analysis

The study has been conducted on consumers who have purchased agricultural products via online platforms. A total of 159 respondents from the staff in UiTM Perlis have been gathered to participate in this survey. The distribution of the respondents' profiles has been presented in Table 4. According to the above data, 92 of 159 respondents are male (57.9%), and 67 of them are female (42.1%). This shows that most of the respondents who attempted this questionnaire are males. These findings are similar to those of Isa et al. (2020), where males (51.4%) are the largest group of respondents who performed online shopping during the movement control order (MCO), followed by 48.6% of female respondents. Most participating respondents belonged to the 30-39 years and 40-49 years age groups, with 32% and 40%, respectively, the highest of the five age categories. Only 6.3% of respondents were aged below 20 years, and this survey also received 35 responses from respondents aged 50-59 years, which is equivalent to 22% of the total. A total of 138 respondents were married (87%), and the rest were single (13%). All the respondents who participated in this study are Malay (100%). About 68 of the respondents, who represent 42.8% who attempted this survey, were pursuing education up to secondary school. About 91 of them, representing 57.23% were pursuing a higher qualification level from a diploma to the highest qualification they have obtained, which is a Doctorate holder, accounting for 20 respondents or 12.6%. Notably, more administrative staff members have participated in the study compared to academic staff, hence contributing to a higher proportion of staff with diploma qualifications. Furthermore, most of the staff members have been working for a considerable period. This long tenure has resulted in salary increases over time, reflecting their extensive experience and loyalty to the institution. As a result, a significant majority of staff participants are between the ages of 40 and 49, indicating mature and experienced work. The monthly income of the respondents has been grouped into three categories, which are monthly income below RM4850 grouped as B40, RM4851 - RM10970 (M40), and RM10971 and above for T20. From an income of RM 4,851 - RM 10,970 (M40), there are 111 respondents to this survey, representing 69.8% overall. These findings indicated that many of the respondents are from middle-income groups who prefer to shop online. From an income of RM 4,850 and below (B40), 40 respondents responded to this survey, representing 25.2% overall. With an income of more than RM10,971 (T20), eight respondents responded to this survey, representing 5% overall. The majority of respondents (56%) had an average household size between 4 - 6 people.

Table 4: Summary of the Respondents' Profile

Demographic Profiles	Categories	Frequency	Percentage (%)
Gender	Male	92	57.9
	Female	67	42.1
Age	20-29	10	6.3
	30-39	51	32.1
	40-49	63	39.6
	50-59	35	22
	60-69	21	13.2
Marital status	Single	21	13.2
	Married	138	86.8
Race	Malay	159	100
Educational level	Secondary school	68	42.8
	Diploma	31	19.5
	Bachelor's degree	12	7.5
	Master's degree	28	17.6
	Doctoral Degree/PhD	20	12.6
Monthly income	Less than RM 4,850 (B40)	40	25.2
	RM4,851-RM10,970 (M40)	111	69.8
	RM10,971 and above (T20)	8	5.0
No. of household	1-3 persons	58	36.5
	4-6 persons	89	56
	More than 6 persons	12	7.5

There are three main settlement areas in Malaysia, namely urban, suburban, and rural. Figure 3 shows the distribution of the settlement area of respondents in the study, where the majority of respondents, 55% (87 respondents), live in urban areas, with 49 (31%) living in rural areas and 23 respondents (14%) in suburban areas.

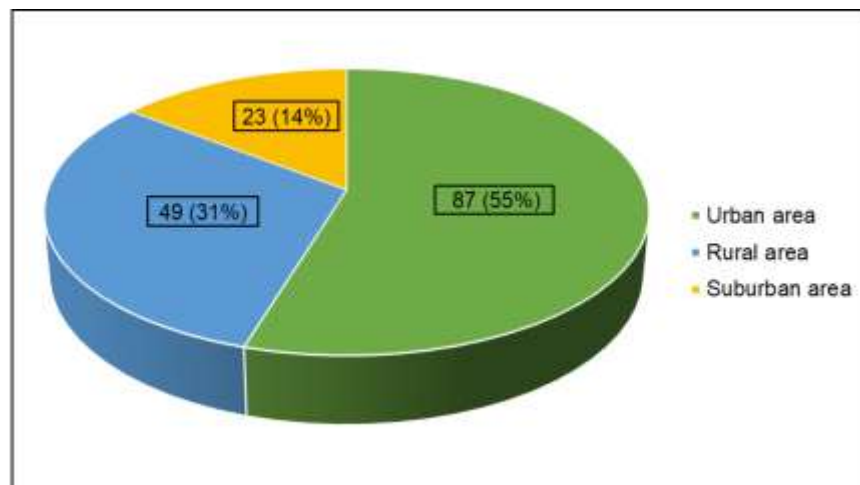


Figure 3: Area of respondents

Relationship Between Consumers' Preference to Buy Agricultural Products via Online Platforms and Availability of Information, Quality, Price and Perceived Risk

Pearson's Correlation analysis was a method used to present and describe numerical indicators of the direction and strength of linear relationships between the dependent variable (respondents' preferences for purchasing agricultural products via online platforms) and the independent variable (availability of information, quality, price, and perceived risk). Since the study variables were continuous, the Pearson Correlation was found to be an acceptable analysis (Saccenti et al., 2023). Table 5 highlights the summary of Pearson's correlations of the respondents' preferences to purchase agricultural products via online platforms and availability of information, quality, price and perceived risk elements. The four independent variables, including availability of information, quality, price, and perceived risk, show a positive and highly correlated relationship with consumers' preferences to purchase agricultural products.

Table 5: Pearson Correlations

		Consumers' Preferences Towards Online Purchasing of Agricultural Products	Availability of Information	Quality	Price	Perceived Risk
Consumers' Preferences Towards Online Purchasing of Agricultural Products	Pearson Correlation	1	.761**	.652**	.643**	.615**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001
	N	159	159	159	159	159
Availability of Information	Pearson Correlation	.761**	1	.671**	.621**	.645**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001
	N	159	159	159	159	159
Quality	Pearson Correlation	.652**	.671**	1	.672**	.614**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001
	N	159	159	159	159	159
Price	Pearson Correlation	.643**	.621**	.672**	1	.618**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001
	N	159	159	159	159	159
Perceived Risk	Pearson Correlation	.615**	.645**	.614**	.618**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	159	159	159	159	159

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

The first independent variable, availability of information, reveals a significant positive and strong correlation towards consumers' preferences to purchase agricultural products online ($r=.761$, $p <.001$). Availability of information should be simple, ease of site navigation, and accessibility for users to use, making consumers less hesitant to purchase online. In addition, consumers always prefer to purchase from websites that are easy to access and well organised as well, and consumers can directly compare the price offered by the seller and platform providers. Plus, many platforms offer features that allow consumers to contact the seller directly

if they have any questions regarding the products sold. Feedback from other consumers also plays a crucial role in convincing potential buyers to make a purchase. The findings of this study were supported by Kasuma, Kanyan, Khairol and Sa'ait (2020), who stated that consumers may find it easier to compare products and make good decisions with a well-designed online shopping platform that offers enough information about the products. An abundance of information is available at the tips of the fingers.

The second independent variable indicated a significant positive and strong correlation towards consumers' preferences to purchase agricultural products via an online platform ($r=.652$, $p < .001$). It means that the quality of agricultural products and products is important to be considered when consumers decide to purchase online. When it comes to the quality of goods, the inability to evaluate products without being able to touch or see them in person. Often, many consumers have a bad experience during online shopping when the products received do not meet their expectations as displayed on the online platforms, which can discourage them from shopping online due to concerns about quality. These findings are in line with Zuo and Guo (2023), who stated that fresh agricultural produce in online shops affected consumers' first impression of it and played a crucial role in consumers' evaluation of the overall purchasing experiences.

Next, a significant and strong positive correlation was also demonstrated by price factors and consumers' preferences to purchase agricultural products via online platforms ($r=.643$, $p < .001$). Buying goods through online platforms often results in lower prices than in physical stores. This price difference is because of several factors, such as price discounts offered by the online sellers to attract more consumers to purchase it online. Various promotion strategies have been implemented to attract and persuade consumers to shop online, such as through discounts and promotions. For example, many sellers create special sales events via online platforms like Shopee, where the seller launches a payday sale that offers up to 70% to attract more customers. These promotions provide significant price reductions, making online shopping more appealing. Thus, encourages a considerable influence on consumer preferences for purchase, as the financial advantage of reduced prices encourages more consumers to choose online shopping over physical stores. These results are supported by Faryabi et. al (2012), who have proven that price discounts and promotions have a positive effect on consumers' preferences to shop online. Price promotion could notify consumers of the price of goods before and after they put the promotion price. Consumers may also receive exclusive offers and discounts on different platforms, especially during the event days, such as the Pay Day sale in Shopee (Pandey & Parmar, 2019).

Lastly, perceived risk also shows a significant positive and strong correlation between perceived risk and consumers' preferences to purchase agricultural products, with ($r=.615$, $p < .001$). Nowadays, almost everything we do daily involves the use of the internet, which has raised concerns about data theft and information security. Consumers are particularly worried about three main types of risks, including financial risk, information risk, and privacy risk. Financial risk, such as the potential loss of money due to fraud or scams. Information risk pertains to the possibility of personal data being stolen or misused. Privacy risk involves concerns about unauthorised access to personal data. These findings are consistent with Almaiah et. al (2022), where the potential loss of control over personal information occurs when information is used without permission. This type of doubt indicates that consumers are concerned that an online store may abuse their financial and personal information and share it with third parties, or that the store will be unable to protect their information from cybersecurity

threats. Thus, risks make consumers feel hesitant and cautious about purchasing online, influencing their overall shopping behaviour and trust in online platforms.

The Effect of the Availability of Information, Quality, Price and Perceived Risk on Influencing Consumers' Preferences to Purchase Agricultural Products via Online Platforms

Multiple Regression Analysis was utilised to determine the relationship between dependent variables, consumers' preferences to purchase agricultural produce and products via online platforms and the independent variables (availability of information, quality, price and perceived risk). The model reveals that the R-value was .801 and the R Square value was .642, the F value was 69.053, and the p-value was significant at 0.1% as indicated in Table 6. The coefficient table predicts that consumers' preference to purchase agricultural products via online platforms from the independent variables, the availability of information, quality, price and perceived risk. Based on the results, it shows that only two independent variables, namely the availability of information and price, influence consumers' preference to purchase agricultural produce and products via online platforms, as the p-value is less than 0.05. The other two independent variables, which are quality and perceived risk, do not significantly influence consumers' preference to purchase agricultural products via online platforms.

Table 6: Regression Analysis

Independent variable	β	t- statistic	p-value
(Constant)		.848	.398
Availability of Information	.488	6.750	<.001
Quality	.137	1.863	.064
Price	.185	2.600	.010
Perceived Risk	.101	1.471	.143
R ²	.642		
Adjusted R ²	.633		
F-value	69.053		

Dependent variable: Consumer preferences to purchase agricultural products

Y (Consumer preferences to purchase agricultural products via online platforms) = .607 + .488 (Availability of Information) + .137 (Quality) + .185 (Price) + .101 (Perceived Risk)

The coefficient of X_1 is 0.488, representing the partial effect of the availability of information on consumers' preference to purchase agricultural produce and products via online platforms, holding other variables constant. The estimated positive sign implies that such an effect is positive and that consumers' preference to purchase agricultural produce and products sold in an online platform would increase by .488 for every unit increase in the availability of information, and this coefficient value is significant at the 0.05% level. As consumers purchase through online platforms, their decision to purchase is based on the information provided by the seller. Any information regarding the products is important and will influence consumers' preferences to purchase. The more information provided, it would not only grab the consumers' trust about the product, it also convinces consumers to make a purchase. This finding has been supported by research done by Chen (2023), where consumers are increasingly inclined to obtain product information from reviews when making purchase decisions. Hence, it is important for the sellers, especially, to distribute as much information as possible the information on their product's sales.

The coefficient of X_3 is 0.185, representing the partial effect of the price on consumers' preference to purchase agricultural produce and products via online platforms, holding other variables constant. The estimated positive sign implies that such an effect is positive and that consumers' preference to purchase agricultural produce and products sold in an online platform would increase by .185 for every unit increase in price, and this coefficient value is significant at a 0.05% level. Price plays an important role in influencing consumers to spend. Plus, the high cost of living makes consumers allocate their money according to their priorities. In an online platform, most of the sellers will charge the products at a lower price, thus attracting consumers to purchase, especially for price-sensitive consumers. If the sellers sell the products at a high price compared to the other sellers, consumers will automatically look for the products from the other available sellers to get value for their money. Novialeta and Slamet (2020) in their study also found that price has a significant effect on online shopping consumer satisfaction. That is, the price given by online sellers is better and cheaper than the price given by traditional sellers (offline), so consumers feel more satisfied when shopping online. The preference to purchase agricultural goods online also increases gradually.

Conclusion

This study highlights the central role of the availability of information and price in influencing consumers' preferences to purchase agricultural products online. While quality and perceived risk are important at the perceptual level, the factors did not significantly predict purchase behaviour in the regression model. These findings underscore that consumer prioritize platforms that provide comprehensive, transparent information and competitive pricing, particularly in an era where online shopping has become a dominant retail channel (Fu et al. 2022; Gerpott & Berends, 2022). In practical terms, agricultural e-commerce platforms must focus on enhancing transparency, accessibility and affordability to remain competitive. As online shopping becomes increasingly integrated into consumer lifestyles, trust-building mechanisms such as reviews, real-time communication with sellers, and a secure transaction system also remain essential.

Acknowledgements

I want to express my sincere gratitude to my supervisor for her guidance and support throughout this research. I want to extend my appreciation to Universiti Teknologi MARA Perlis Branch for providing the necessary resources to complete this study.

References

- Almaiah, M., Alhumaid, K., Aldhuhoori, A., & Alnazzawi, N. (2022). Factors affecting the adoption of digital information technologies in higher education: An empirical study. *Electronic* 2022, 11, 3572.
- Anggraeni, & Soliha, E. (2020). Kualitas produk, citra merek dan persepsi harga terhadap keputusan pembelian (Studi pada konsumen kopi Lain Hati Lamper Kota Semarang). *Al Tijarah*, 6 (3), 96-107.
- Azam, N.H.M, Aris, N.F.M., Ahaddon, N.E.S., Fatah, F.A. & Saili, A.R. (2022). Consumers' attitude towards agriculture products purchased via e-commerce platforms in Selangor. *International Journal of Accounting, Finance and Business*, 7 (41), 274-284.
- Chen, L. (2023). Effective strategies for attracting and engaging target audiences in today's competitive market. *Journal of Education, Humanities and Social Sciences*, 10.54097.
- Djarmiko, T. & Pradana, R. (2016). Brand image and product price; Its impact for Samsung smartphone purchase decision. *Procedia - Science and Behavioral Sciences*, 219, 221-227.
- Economic Planning Unit. (2021). 12th Malaysian Plan. Malaysia: Percetakan Nasional Malaysia Berhad. https://ekonomi.gov.my/sites/default/files/flipping_book/RMKe-12/mobile/index.html
- Faryabi, M., Sadeghzadeh, K., & Saed, M. (2012). *The Effect of Price Discounts and Store Image on Consumer's Purchase Intention in Online Shopping Context Case Study: Nokia and HTC*. *Journal of Business Studies Quarterly*, 4(1), 197-205.
- Fauzi, M.R., Rahayu, E.S. & Handayani, S.M. (2022). Durian fruit marketing strategy based on consumer preferences in Ponorogo Regency East Java Indonesia. *Al-Rashad Journal of Islamic Finance*, Vol. 2 (1), 1-18
- Fu, S., Liu, X., Lamrabert, A., Liu, H. & Huang, Y. (2022). Green production information transparency and online purchase behaviour: Evidence from green agricultural products in China. *Frontier in Environment Science*, 1-13
- Geetha, C., Chin, K. S., Bachok, F. I., Kong, W. L., Liew, H. X., & Lim, M. F. (2021). The perceived risks that influence the intention of consumers to do online purchases in East Malaysia. *Malaysian Journal of Business and Economics*, 2289-8018.
- Gerpott, T.J., & Berends, J. (2022). Competitive pricing on online markets: A literature review. *Journal of Revenue and Pricing*, 21 (6), 596-622.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modelling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46 (1-2), 1-12
- Han, L., Vivian, L., & Chenhao, T. (2021). Understanding the effect of out-of-distribution examples on human-al decision making. *Proceedings of the ACM on Human-Computer Interaction*, 1-45.
- <https://www.similarweb.com/top-websites/malaysia/e-commerce-and-shopping/>
- International Telecommunication Union. (2021). Measuring digital development - Facts and figures 2021. Geneva Switzerland. <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2021.pdf>
- Isa, K., Shah, J.M., Palpanadan, S.T. & Isa, F. (2020). Malaysian's Popular Online Shopping Websites during Movement Control Order (MCO). *International Journal of Advanced Trends in Computer Science and Engineering*, 9(2), 2154-2158.
- Kasuma, J., Kanyan, A., Khairol, M., & Sa'ait, N. (2020). Factors influencing customers' intention for online shopping. *International Journal of Modern Trends in Business Research (IJMTBR)*, 2600-8742.
- Khaniwale, M. (2015). Consumer Buying Behaviour. *International Journal of Innovation and Scientific Research*, 14, 278-286.

- Kotler, P. & Armstrong, G. (2014). Principles of Marketing, 15th Edition, Pearson Education, England.
- Liu, L., Li, L. Q., Liao & Cao, Y. Z. (2018). Exploring the influential factors of consumers' willingness to purchase fresh agricultural purchase online: A Meta-analysis. *In Proceedings of the 18th International Conference on Electronic Business*, 304-316.
- Malaysia Communication and Multimedia Commission (MCMC). (2022). Internet Users Survey 2022. *Suruhanjaya Komunikasi Multimedia Malaysia*. <https://mcmc.gov.my/skmmgovmy/media/General/IUS-2022.pdf>
- Mastercard Worldwide Insights (2008), "Online shopping in Asia-Pacific – patterns, trends and future growth", available at: www.mastercard.com/us/company/en/insights/studies/2008/asiaonlineshopping.
- Novialeta, N., & Slamet, M. R. (2020). The effect of security, information availability, delivery, quality, price and time in online shopping consumer satisfaction. *Proceedings of the 2nd International Conference on Applied Economics and Social Science*.
- Pandey, A., & Parmar, J. (2019). A study of factors affecting consumer's online shopping behaviour and their impact on behavioral intention. *Effulgence-A Management Journal*, 17 (2), 101-113.
- Putra, P. I. P., Pramana, M. S., & Dewi, K. G. (2024). The influence of product quality and price on online purchase decisions on the Shopee marketplace. *Journal of Economics, Finance and Management Studies*, 7 (3), 2644-0504
- Ramya, N., & Ali, M. (2016). Factors affecting consumer buying behaviour. *International Journal of Applied Research*, 2 (10), 76-80.
- Rejikumar, G., & Asokan-Ajitha, A. (2020). Role of impulsiveness in online purchase completion intentions: An empirical study among Indian customers. *Journal of Indian Business Research*, 13 (2), 189–222. <https://doi.org/10.1108/JIBR-04-2018-0132>
- Sacenti, E., Hendriks, M. H. W. B., & Smilde, A. K. (2023). Corruption of the Pearson correlation coefficient by measurement error and its estimation, bias and correction under different error models. *Scientific Reports*, 13 (1).
- Safari, S., & Mahnoon, S. (2016). Perceptions and inclinations of consumers towards the purchase of fresh agricultural produce via e-business. *Economic and Technology Management Review*, 11, 111-121.
- Safari, S., & Masdek, N. M. (2020). Consumers' perception and acceptance of fresh agriculture product purchased through e-business. *Journal of Agribusiness Marketing*, 7, 49-59.
- Safari, S., & Ngusman, A. (2020). An overview of developments and prospects for e-commerce agri-food products in Malaysia. *Food and Fertilizer Technology Center Agricultural Policy Platform*.
- Similarweb. (2023). Top E-commerce & Shopping Websites Ranking in Malaysia, available at Suntharalingam, C., Rathakrishnan, T., & Safari, S. (2021). Determinants of fruit purchasing decision among Singaporean consumers: An empirical study. *Journal of International Food and Agribusiness Marketing*, 35, 1-31.
- Vasudevan, P., & Arokiasamy, L. (2021). Online shopping among young generation in Malaysia. *Electronic Journal of Business and Management*, 6 (1), 31-38.
- Wang Y., Liu Z., & Jiang J. (2023). The effect of positive emoticons on consumers' purchase intention. *Psychological Science*. 46, 435–442.
- Wenyi, H. (2020). Research on online buying behaviour of agricultural products. *Information Systems and Economics*, 1, 18-24.
- Wu, C., & Liu, R. (2016). A study on consumers' intentions and attitudes to fresh agricultural products for online shopping in China. *International Journal of Simulation Systems, Science & Technology*, 17 (45)

- Zeidner, M., Boekaerts, M., & Pintrich, P. (2000). Self-regulation Direction and Challenges for Future Research, *Handbook of Self-regulation* (pp. 749–768). <https://www.sciencedirect.com/science/article/pii/B9780121098902500524>.
- Zhuang, Q., (2018). An empirical study on the influencing factors of consumers' fresh agricultural products purchase behaviour. *The 4th Annual 2018 International Conference on Management Science and Engineering*, 15-21.
- Zuo, R., & Guo, Q. (2023) Analysis of influencing factors of consumers' online purchase intention of fresh agricultural products based on online review. *E3S Web of Conferences* 409, 04006.