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Factors Influencing Consumer's Behavioural Intention to Purchase Fresh Agricultural Products from In-App

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Abstract

This paper presents the factors that influencing consumer on in-App purchase behaviour for fresh agriculture product. The consumer can be defined as a person or groups that buy goods for their consumption and not for resale or commercial purpose. Consumer behaviour is the study of the processes involved when individual or groups select, purchase, use, or dispose of the product, service, ideas or experiences to satisfy needs and desires. While, the in-App purchase can be referred to the buying of product, good and services using a mobile application. Nowadays seller and producer are more concerned with consumer behaviour because it helps them to get information about how the consumers think, feel and choose their products. The present study attempts to fill the research gap by focusing on exploring the factors that associated with in-App purchasing behavioural intention and measured the consumer behavioural intention level toward in-App purchasing. A quantitative research method was used in this study. The data collected among 164 consumers in Klang Valley above 18 years old using online survey method. The results revealed that personal factor, social factor and cultural factor are the factors that influenced consumer's behavioural intention to purchase fresh agricultural products form In-App and Malaysian have moderate to high intention level in using In-App. Therefore this study can be contribute to assist online retailers of fresh agricultural product to explore impactful strategies to gain more consumer's trust to use online application to buy fresh agricultural products.

Keywords: Fresh Agricultural Product, Behavioural Intention, In-App Purchase

Introduction

Internet is a platform that allows everyone regardless of age to search information and socialize. Based on the Malaysian Communication and Multimedia Commission (2021), 88.7 percent of the population in Malaysia are active internet users. Nowadays the use of the internet has given opportunities to sellers and buyers to do transaction online. Online shopping is a simple solution to the hectic life in today's world, especially for the urban community. It gives convenient to customers because it saves a lot of time for modern people.

Unlike purchasing through a physical store, purchasing online allows customers to get complete information about a product they want to buy because usually all the goods in online stores describe through text with high-resolution photos. In-App purchasing refers to a smartphone or mobile device application which allow selling of products or services online via a specific application such as Shopee, Lazada, Agrobazar and so on. Nowadays there are many online applications for the consumers to purchase products and services. There are even online applications for purchasing fresh agriculture products such as Agrobazaar application, Jaya Grocer application and Happy Fresh application.

The concept of online groceries in Malaysia started in mid-2020 with the service providers such as PasarBorong.com, SubangGrocer.com, CGdeMart.com and Citraspicemart.com (Sulastri et al., 2017). However, online groceries especially agricultural product was not well accepted in Malaysia at the beginning of its introduction. One of the reasons for this slow adoption rate is the inability of online sellers of agricultural products to explore appropriate strategies to ensure that consumers are aware of products that are sold online. (Ghazali et al., 2006). Moreover, organoleptic (touch, smell, sight) experience in selecting fresh product do not as yet transfer well online (Park et al., 2021). In accordance with the passage of time and changes in lifestyle as well as awareness of ICT knowledge among Malaysians has opened opportunities for the development of online groceries. The Covid-19 pandemic that hit the world in early 2020 has also accelerated the adoption of online grocery shopping (Park et al., 2021). Based on statistics from the Department of Statistics Malaysia (2021), businesses registered online have recorded an income generation of RM279 billion in the third quarter of 2021 and showed an increase of 17.1 percent compared to the third quarter of 2020. It shows a positive outlook for online business and agricultural product sellers need to explore online business potential to be more competitive. In addition, grocery businesses that operate online have improved the quality of service to users such as improving product quality, expanding delivery areas as well as security and safety of personal information.

Therefore, this study was conducted to identified two primary research objectives

1. To determine factors influencing consumers' behavioral intention to purchase fresh agricultural products from In-App.
2. To measure the consumer behavioural intention level toward purchasing of fresh agricultural products from in-App.

The development of the conceptual framework in this study is based on the Theory of Planned Behaviour (Ajzen, 1991). Four variables are taken from the literature review and are incorporated into the study model as shown in Figure 1. The variables are social, culture, and personal.

Literature Review

Purchase Behaviour Intention

Purchase Behavior Intention define as "the probability of customers making a decision to buy or otherwise a product or service later"(Wu et al., 2011) and it is the last stage before the customer purchase a product or service (De Magritis & Gracia, 2008). In addition, according to Marlien et al (2020) purchase behavior intention means the customer's intention or desire towards purchasing a product or service. While according to Morwitz et al (2007), information obtained from purchase behavior will determine the overall business strategy for a business

entity. Therefore, purchase behavioral intention is important to understand because the final purchasing behavior is derived from the customer's intention (Bai et al., 2008). He et al., (2008) stated that the failure of a business that operates online is lacking in consumer intention to shop online.

According to the Theory of Planned Behavior by Ajzen (1991), consumer intention towards purchasing behavior is influenced by personal factors and social factors. These two factors are the main factors influencing consumer's purchase intention and will lead to consumer behavior to do online shopping. In addition, culture is also an important element that determines individual's wants and behaviors (Kotler & Keller, 2016). According to Lawan and Zanna (2013), culture also plays a role in influencing patterns of household consumption and society.

Personal Factor

Personal factors such as age, occupation and lifestyle may influence consumer buying decision (Kotler & Amstrong, 2012). This element can explain why individual preferences sometimes change with the changes of situation.

Ages are one of the variables that greatly influence the decision of the customer to buy. Consumer behaviour varies with their age (Shamri et al., 2021). The older the person they have the more experience buying than the younger. The aged and the young are very different in terms of decision making. It is because older people make choices based on their experience, whereas younger people with less experience rely on mark and price (Kotler & Keller, 2016).

The profession and buying power of a customer often affected consumer buying decisions and buying behaviour. People with same occupations tend to enjoy similar tastes in music, clothes and leisure. They usually socialize and share values, opinions, desires and ideas (Solomon, 2004). For instance, the buying behaviour of a doctor is very different from a lawyer and a policeman. The reason is every occupation have different needs which will influence the purchasing decision. Even a manager and low-level worker have different purchasing decision and behaviour. For instance, a marketing manager of a company will try to purchase business suits, whereas a low-level worker in the same organization will purchase rough work clothing.

The lifestyle of a consumer will have great effect on his behaviour and buying decisions. An individual's lifestyle covers all of his/her activities, interests, values and opinions. It will also tell how the person lives and spends money. The consumer behaviour and purchasing decision are related closely to their lifestyle. The product choices made by customers have direct relationship with individual’s lifestyle (Khan, 2007).

Social Factor

Social factors are among the factors that affect consumer behaviour significantly. Every consumer will have someone around them that will influence their buying decisions (Kim et al, 2013). An individual always seek confirmation from the people around her/him (George, 2011). This explains that outside influences can affect the consumer purchase decisions either directly or indirectly.

For an adult, family influence could be the most major factor that lead to purchasing behavior. Family members can influence individual consumers ' purchasing behaviour as they create the atmosphere for an individual to learn values, and shape personality. A family influences initial impressions of the goods and consumer habits (Sulastri et al., 2017).

Reference group influences the consumers' in-App purchasing behaviour. A reference group is a group of individuals to which an entity is related. The reference group gives consumers numerous comparison points regarding their attitude, lifestyle or behaviour. Reference group is a group of people who have a strong influence on the attitudes and behaviours of individuals whether directly or indirectly (Durmaz, 2014). There are many other reference groups consisting of close friends, colleagues, working groups or other people with whom consumers communicate.

Cultural Factor

Cultural factors include a set of values and beliefs of a given community or group of people. Culture varies according to location and geographic area (Kotler & Keller, 2012). Consumers in developing countries have different behavior from consumers in developed countries. Among the common culture of consumer in developing countries is cash-centric payment culture while cashless culture or payment by credit card is a habit for consumers in developed countries. Therefore, culture is vital to understanding an individual's desires and behaviours. Cultural factor has a significant effect on consumer purchasing decision since each consumer has different habits, beliefs and principles that they develop from the culture and social class. Culture, however, will shift over a time period. Changes tend to be gradual, as culture is deeply integrated into the behaviour of people (Durmaz, 2014).

The social class to which they belong is determined by consumer behaviour. In a society whose members share similar values, preferences and behaviour, social class is fundamentally a permanent and structured division (Kotler & Keller, 2012). Throughout our society there are three different social divisions of the higher, middle and lower classes. All these three levels of society will impact consumer purchasing behaviour (Ali, 2016). Then we will find similar beliefs, attitudes, preferences and activities in people that belong to the same social class. Lower-class consumers would rely more on quality while middle-class consumers carefully purchase and collect information to compare different producers in the same lineup. Upper class buyers will be more drawn to elements like price and social benefit from the commodity (Shamri et al., 2021).

Methodology

This study is based on Theory of Planned Behavior by Ajzen (1991) that has been modified and expands to suits this study. Personal factor, cultural factor and social factor are among factors that predicted to have influence towards consumer's behavioral intention to purchase fresh agricultural products from In-App. Structured online survey using questionnaire were developed and distributed to targeted respondents. The primary data have been obtained from 164 online fresh agricultural consumers in Klang Valley age above 18 years old by using convenient random sampling technique. To achieved the objective of this study, there are two types of analysis being used which are descriptive analysis, exploratory factor analysis and intention level calculation. Descriptive statistics was used to describe the demographic profile of the respondents. Exploratory factor analysis was used to identify the latent factors underlying consumer's behavioral intention to purchase fresh agricultural products from In-App. And intention level calculation was used to measure the intention level of consumers in using In-App for purchasing fresh agricultural products.

Result and Discussion

Descriptive Analysis

Table 1

Respondents Profile

Characteristics	Description	Frequency	Percentage (%)
Gender	Male	50	30.5
	Female	114	69.5
Marital status	Single	116	70.7
	Married	42	25.6
	Divorced/widow	6	3.7
Age	18-27 years old	120	73.2
	28-37 years old	23	14
	38-47 years old	19	11.6
	Above 47	2	1.2
Income	Below RM1000	27	16.5
	RM1001-RM3000	58	35.4
	RM3001-RM5000	20	12.2
	Above RM5000	8	4.9
	Not all above	51	31.1
Education	Primary school	5	3
	Secondary school	21	12.8
	Diploma	47	28.6
	Bachelor degree	89	54.3
	Other	2	1.2

Table 1 indicate the finding of descriptive analysis. There are 164 respondents took part in this study. Based on the descriptive analysis, 30.5% or 50 respondents are male and 69.5% or 114 respondents are female. The respondents of this study were classified into three groups, the majority of which were single (116 people, or 70.7%), married (42 people, or 25.6%), and around 6 people, or 3.7%, were divorced or widows. The participants to this study fall into 4 different age categories. 120 respondents, or 73.2 percent, of the total were between the ages of 18 and 27. There were 23 respondents (14%) from the 28–37 age group, 19 respondents (11.6%) from the 38–47 age group, and 2 respondents (1.2%) who were over the age of 47.

The respondents were divided into five groups, each with a different income. The preponderance of respondents, 58 people, or 35.4% have incomes between RM1001 and RM3000, followed by 27 respondents or 16.5% with incomes below RM1000, 20 respondents (12.2%) with incomes between RM3001 and RM5000, and 8 respondents (4.9%). 51 persons (31.1%) said that their income was not as indicated since they were students without current employment. The respondents to this study were divided into five educational levels. 5 people (3%) receive basic school education, 21 receive secondary education (12.8%), 47 receive diplomas (28.6%), 89 receive bachelor's degrees (54.3%), and 2 receive master's degrees (1.2%).

Exploratory Factor Analysis

Kaiser-Meyer-Olkin (KMO) Test is a test which measures the appropriateness of data for factor analysis. The test measures the sampling appropriateness for each model variable and

for the whole sample (Stephanie, 2016). The return values for KMO range from 0 to 1. The sampling is adequate to interpret the statistical KMO values ranging between 0.8 and 1 according to the thumb rule; values below 0.6 suggest that the sampling is not sufficient and that corrective action should be taken and close to zero implies that there are significant selective correlations with respect to the number of correlations. In other words, there are common associations for factor analysis which are a major problem. Table 2 shows the KMO values for this research which are 0.806, meaning the sampling is adequate.

Bartlett's Test of Sphericity was used to test the matrix of correlation for the hypothesis made. Its indicate that the variables are irrelevant and therefore undesirable for structure detection. Low values (less than 0.05) of significance level suggest that the data may be useful for a factor analysis. Bartlett's Test of Sphericity was significant at 1% level of significance. Chi-Square value for Bartlett's Test of Sphericity was 1214.484 with degree of freedom (df) 120 (Table 2).

Table 2
KMO and Bartlett's Test Result

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.806
Bartlett's Test of Sphericity	Approx. Chi-Square	1214.484
	df	120
	Sig.	0.000

Next, communalities indicate the amount of variability that is accounted for in each factor. It also can be defined as the sum of squared factor loadings for the variables. The PCA Method is used on the extraction method.

Table 3
Variable and Communalities Result

Variables	Extraction
1.My society culture affect my buying behaviour	0.652
2.My social class affect my buying behaviour	0.671
3.Most people in my social class use mobile application to buy fresh agriculture product	0.605
4.I will purchase from mobile application that suggested by my family members	0.600
5.I will purchase from mobile application that suggested by my friends	0.631
6.I will purchase from mobile application based on my family members' good experience	0.682
7.I will purchase from mobile application based on my friends good experience	0.672
8.Most people my age are using mobile application to purchase fresh agriculture product	0.705
9.I prefer to purchase fresh agriculture product using application because I am busy with work	0.589
10.Using mobile application will save my time for shopping	0.572
11.I am following the current trend of using mobile application to purchase fresh agriculture product	0.686

12.I like to purchase fresh agriculture product using application rather than going to shop because it is easier	0.663
13.I will purchase the fresh agriculture product based on product's rating	0.822
14.I will purchase the fresh agriculture product based on positive customers' comment and feedback	0.767
15.I have experience purchase fresh agriculture product using application	0.703
16.I will purchase fresh agriculture product using application because I have good experience from previous purchase	0.530
Chronbach's Alpha	0.832

n=164
Extraction Method: Principle Component Analysis (PCA) Method

In this study, the highest values of communalities are 0.822 and the less value is 0.530. There are 4 items that have the lowest value of 0.5 and the values that are less than 0.5 has been cut off. Communalities values that are above 0.5 are acceptable in social science which means the variables that score below than 0.5 should be cut off from this analysis. In the total of 20 items, only 16 items are collected to run the factor analysis. The Cronbach's Alpha of 0.832 is acceptable where the value is more than 0.5.

Table 4 shows Principal Component Analysis (PCA) with varimax rotation performed on the survey data. Principal Component Analysis (PCA) is the method that is commonly used to group variables under few unrelated factors. PCA is a dimension-reduction approach to reduce a huge set of variables to a tiny set containing most of the information in a huge set. Variables are grouped under a factor with a variable loading more than 0.5.

Table 4
Rotated Component Matrix

	Factor Loading		
	1	**2**	**3**
1.Personal Factor			
1. I have experience purchase fresh agriculture product using application	0.835		
2. Most youth are using mobile application to purchase fresh agriculture product	0.811		
3. I like to purchase fresh agriculture product using application rather than going to shop because it is easier	0.775		
4. I am following the current trend of using mobile application to purchase fresh agriculture product	0.737		
5. I prefer to purchase fresh agriculture product using application because I am busy with work	0.694		
6. I will purchase fresh agriculture product using application because I have good experience from previous purchase	0.646		
2. Social Factor			

7. I will purchase the fresh agriculture product based on product's rating	0.829		
8. I will purchase the fresh agriculture product based on positive customers' comment and feedback	0.816		
9.I will purchase from mobile application based on my family members' good experience	0.743		
10. I will purchase from mobile application based on my friend's good experience	0.706		
11. I will purchase from mobile application that suggested by my family members	0.539		
3. Cultural Factor			
12. My social class affect my buying behaviour			0.780
13. My society culture affect my buying behaviour			0.766
14. Using mobile application will save my time for shopping			0.636
Cronbach's Alpha:	0.869	0.833	0.694
Eigenvalue:	5.394	2.215	1.340
Percentage of variance %:	38.528	15.182	9.570
Cumulative percentage of variance %:	38.528	53.709	63.27

n=164
Extraction Method: Principal Component Analysis.

All the factor loadings fall into the acceptable range 0.5 values. The cumulative percentage of 63.279% represented all the factors and it is acceptable value according to Hair et al. (1998). The Cronbach's Alpha for personal, social and cultural factors is 0.869, 0.833 and 0.694 respectively. The higher score or the most influenced the factors that influencing consumer on in-App purchase behaviour for fresh agriculture product is personal factor. From the result, it shows that the three factor has influenced the factors that influencing consumer on in-App purchase behaviour for fresh agriculture product.

Based on the results in table 4.3, personal factor is the first factor with the Cronbach's Alpha of 0.869. Personal factors' items have the range of loading between 0.646 to 0.835. There are six items in personal factors and all personal factor loadings value is more than 0.5 indicate that all the items are acceptable. Personal factor is able to explain 38.53% of the variance which is the highest variance in the study. Social factor's Cronbach's alpha is 0.833 which is slightly lower Cronbach's alpha than the personal factor. Social factor able to explain 15.13% of the total variance. There are five items under social factor and the item's loading for social factor ranged from 0.539 to 0.829. The least variance value is from cultural factor which only manage to explain 9.57% of the total variance. There are three items under cultural factor. Even though cultural factor has the lowest Cronbach's Alpha among three factors but still acceptable as the value is more than 0.5. The smallest value of items loading in cultural factor is 0.636 and the highest value is 0.780.

Intention Level Score

Based on the intention level calculation, the majority of respondents have moderate to high intention level in purchasing fresh agricultural products from In-App. Table 6 shows the intention level of respondents in the study. 77 from 164 respondents have a moderate intention in purchasing agricultural product through In-App. 61 respondents or 37.2% have a high intention level to use In-App to purchase agricultural product. Only 26 out of 164 or 15.9% of the respondents have low intention level in in-App usage to purchase agricultural products. From the finding, we can conclude that majority of respondents are still having moderate intention to use in-App to purchase fresh agricultural products. The results of the intention level calculation were based on the Salhi and Jemmali (2018) intention level percentage (Table 5).

Table 5
Intention Percentage, Score and Level

Intention Percentage	Intention Score	Intention Level
Above 73%	20-25	1=High Intention
50% - 72%	15-19	2=Moderate Intention
Below 50%	5-14	3=Low Intention

Source: Salhi & Jemmali (2018)

Table 6
Intention Level Results

Intention Level	Frequency	Percent (%)
High	61	37.2
Moderate	77	47.0
Low	26	15.9
Total	164	100.0

Conclusion

This study focuses on identifying the factors that associated with in-App purchasing intention. The discussion of the major findings concluded that the factors that associated with in-App purchasing intention are personal, social and cultural factors. All three factors are associated with in-App purchasing intention and able to explain 63.27% of the total variance with personal factor is the factor that affected the in-App purchasing intention the most, followed by social factor at the second place and cultural factors is the least factors that affecting the in-App purchasing intention.

This study also focuses on to measure the consumer's intention level toward in-App purchasing. Intention level calculation was conducted to measure the consumer's intention level toward in-App purchasing. From the intention level calculation, we can conclude that majority of the respondents having moderate intention to use in-App to purchase fresh agricultural products. However, the percentage of respondent that have high intention level almost near with the moderate intention level which means in-App purchase. From the results we can conclude that respondents have moderate to high intention level in the usage of in-App to purchase fresh agricultural products.

The finding of this study will redound to the benefit of both sellers and buyer that uses application to sell and buy agriculture product. Buying and selling agriculture product using application will benefit both sellers and buyers in a way of accelerate the process of selling and buying. The result from this study will help the seller to understand the factors that associated with in-App purchasing intention of consumer and help the seller to provide better services for the consumer. With the technology advancement nowadays, more online shoppers are projected to use online platform to purchase goods and services. User friendly application are able to help sellers in boosting the sales as the consumers are comfortable with the system. As the sellers provide better service, it will attract more consumers to use application to buy agriculture product. It will also help the seller to make the solution for the problem of limited access to in-App purchase. If this problem was solved, more people will use the application to buy fresh agriculture product.

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