



# Consumers' behavior to purchase fresh agriculture products in the e-commerce platform in Indonesia

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## ABSTRACT

Technological advancement has created previously unimaginable new job and business prospects. One of the business opportunities offered is the chance to establish an e-commerce company. E-commerce experienced rapid growth in 2020 when the COVID-19 pandemic spread. This research focuses on *TukangSayur.id*, an e-commerce platform that offers fresh agricultural products. The aim of this research was to uncover consumer purchasing intentions and decisions regarding fresh agricultural products marketed online, utilizing a combined theory (TAM-TPB) known for its efficacy in explaining online purchases. This study employed descriptive analysis. Data were collected through online questionnaires distributed to 100 respondents and literature review on e-commerce of fresh agricultural products. This research was conducted from July to August 2023. The results found that the majority of online consumers of fresh agricultural products on the *TukangSayur.id* e-commerce platform are women. They are predominantly aged between 26 and 35 years old, with education levels ranging from diploma to graduate. There are three types of consumer behavior in purchasing fresh agricultural products in e-commerce: type A, type B, and type C. The majority of consumers fall into the type A category, characterized by a positive attitude towards purchasing. Consumers in this category exhibit confidence and trust in products and services. Through Type A, e-commerce platforms can attract more customers because these consumers can provide positive recommendations to others.

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## INTRODUCTION

E-commerce is a digital marketing system that combines electronic and internet technologies. Its growth has accelerated since 2020, coinciding with the onset of the COVID-19 pandemic. According to the 2020 Badan Pusat Statistik (BPS)-Statistics Indonesia Survey, approximately 32.58 percent of goods sold include food, beverages, and groceries. This trend extends beyond ready-made food to encompass fresh

produce like vegetables, fruit, eggs, and fresh fish (BPS, 2020). The International Trade Administration of the U.S. Department of Commerce has shown that global online consumer purchasing increased during the COVID-19 pandemic. Approximately 91% of consumers shop online to fulfill their needs (International Trade of Administration, 2023). E-commerce in fresh agriculture is considered a novel business model with significant potential to drive exports, enhance the country's foreign exchange

reserves, and stimulate the local economy (Kementerian Pertanian, 2020). This business model integrates information and communication technology in the economic and agricultural sectors, leveraging internet technology. The key drivers prompting the significance of developing the e-commerce industry for fresh agricultural products today include the widespread adoption of the internet and the presence of sustainable investment. Another factor stems from challenges related to the characteristics of fresh agricultural products, which are restricted to specific regions, seasonal, and susceptible to damage. This can lead to significant price fluctuations, substantial losses post-production, and inconsistent product quality (Kaja, 2022; Kang & Namkung, 2019; Lin et al., 2021; Teng & Lu, 2016).

Fresh agricultural e-commerce also addresses the problems of asymmetric information in the market, lengthy marketing chains, and provides a convenient shopping option for the community (Zeng et al., 2017). The existence of e-commerce platforms specializing in the sale of fresh agricultural products will make it easier for people to shop daily at any time (Lin et al., 2021). However, until now, e-commerce for fresh products still faces numerous challenges. Fresh agricultural products such as vegetables, fruit, and meat are perishable goods, necessitating immediate distribution to consumers. However, fresh products purchased online sometimes experience delays in reaching consumers. Rahmalia et al. (2022) state online delivery of fresh products typically requires a minimum delivery time of one day after ordering. Additionally, consumers often opt to purchase larger quantities to offset shipping costs. Industry statistics indicate that a significant concern in online e-commerce sales is the loss of freshness quality, ranging from 10% to 30% (Yu & Zhang, 2022). High distribution costs and lack of standardization in products are also significant obstacles in the e-commerce of fresh products.

Mukhni et al. (2020) shows that some e-commerce customers express dissatisfaction with product quality, delivery accuracy, and slow response times from administrators. Khairunnisa (2021) states that the performance value still needs to align with consumer expectations. Product attributes include freshness, viability, and being undamaged, along with product suitability and order re-checking before sending, which affect product completeness. Performance values falling below consumer expectations or interests lead

to consumer complaints on social media platforms, especially Instagram. These complaints include issues such as late deliveries, incomplete products, suboptimal packaging, and lack of communication from staff regarding out-of-stock products.

Several obstacles that persist in *TukangSayur.id*'s e-commerce platform necessitate business owners to consistently understand consumer purchasing intentions and decisions. Ajzen (2015) explains that individual intentions are influenced by three factors: attitude, subjective norms, and behavioral control. Past studies have investigated the intention to purchase organic fresh products and the factors that influence it (Prakash et al., 2023; Sabakti, 2022). They employed the theory of planned behavior (TPB) to uncover purchase intentions. However, this research aims to delve deeper into consumer purchasing intentions and decisions by combining two theories (TAM and TPB). The research of Peña-García et al. (2020) and Rehman et al. (2019) explained that combining the two theories is able to reveal online purchasing intentions better. Therefore, by combining the two theories and incorporating trust and risk factors to elucidate intentions and actual behavior, this research aims to categorize the types of consumers purchasing fresh agricultural products online. This classification enables business owners to precisely identify market shares and devise strategies necessary to boost sales

## RESEARCH METHOD

The research was conducted on *TukangSayur.id* from July to August 2023 using a purposive sampling method. The study specifically focuses on the e-commerce platform *TukangSayur.id*, which is one of the prominent fresh product e-commerce platforms in Indonesia. It has 64.3 thousand Instagram followers and a rating of 4.5. It operates in a wide area covering Jabodetabek to Timika-Papua. However, e-commerce *TukangSayur.id* still requires assistance in its digital marketing efforts to boost sales. The research utilizes both primary and secondary data. Primary data is collected through online questionnaires, which consist of two parts. The first part focuses on respondent characteristics, including gender, marital status, age, occupation, education, and income. The second part of the questionnaire consisted of specific questions based on the research objectives. In this section, the measurement utilized a Likert scale, which indicates

the respondent's level of agreement or disagreement. The Likert scale values are as follows: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.

The total number of respondents in this research was 100. The sample was selected based on specific considerations (purposive sampling). The criteria for respondents were that they had made purchases through the e-commerce platform *TukangSayur.id* and were over 17 years old. The samples were drawn from the Instagram followers of *TukangSayur.id*. This research employs descriptive analysis with a focus on the concept of actual behavior. Descriptive analysis assists in describing, illustrating, or summarizing data points to identify patterns that fulfill all of the data's requirements. The understanding of actual behavior or purchase decisions encompasses perceived usefulness, perceived ease of use, e-commerce trust, consumer attitude, perceived risk, subjective norm, perceived behavior control, and intention.

## RESULT AND DISCUSSION

### Characteristics of Respondent

Respondent characteristics refer to demographic information that enables understanding of specific background traits of an audience, including age, race, ethnicity, income, employment status, marital status, etc. These characteristics serve as valuable initial data for formulating marketing strategies in the future. Demographic information aims to find potential respondents. In this research, characteristic respondents are based on gender, marital status, age, education level, employment status, and income level (Table 1).

Table 1 shows that *TukangSayur.id* e-commerce consumers are predominantly comprised of 75% women and 25% men. In line with (Sabakti, 2022), which show that women dominate online shopping more than men. About 51% consumers were married and 49% single. The characteristics of respondents by age reveal that the age group of 26-35 years accounts for 56% of the total respondents. This research was dominated by respondents with a diploma/bachelor's level of education (67%). Regarding occupation and income level, it is noted that consumers generally work as employees or entrepreneurs with an income ranging from 6 to 10 million.

Table 1. Characteristics of Respondents

Item	Frequency	Proportion %
Gender		
Male	25	25
Female	75	75
Marital Status		
Single	49	49
Married	51	51
Age		
17-25 years	40	40
26-35 years	56	56
36-45 years	4	4
Education level		
Middle/ Senior high school	24	24
Diploma/ Bachelor	67	67
Master Student	7	7
PhD	2	2
Occupation		
Students,	15	15
Government employees,	24	24
Soldiers/police,	3	3
Employees/entrepreneurs,	49	49
Others	9	9
Income (IDR)		
< 1,000,000	-	-
1,000,000-3,000,000	15	15
3,000,000-6,000,000	21	21
6,000,000-10,000,000	60	60
>10,000,000	4	4

Based on the presentation of the results of the characteristics of respondents, it is evident that the largest demographic segment in the online vegetable market comprises married women aged between 26-35 years. The purchase of fresh agricultural products online was predominantly driven by women. This suggests that women have a significant influence and control over managing kitchen responsibilities (Wang et al., 2022). Married women have more responsibilities in their family, they should have food supplies every day. The age range that usually shops online is between the younger generation and early adults, around 26-35 years. In this age, people are considered technologically literate and quickly adapt and adopt the technology offered. Apart from that, *TukangSayur.id* e-commerce consumers were dominated by respondents who have diploma/bachelor level education. Better person's education level, make they easier to shop for fresh agricultural products online. Most are employees or entrepreneurs with an income range of 6-10 million. Consumers who purchase fresh products online are typically from the upper middle class. Understanding consumer characteristics provides valuable information for business actors in formulating online

sales strategies for fresh agricultural products. TukangSayur.id e-commerce can concentrate its sales strategy on the dominant consumer demographics to enhance its sales.

### Online Consumer Attitude

#### 1. Perceived usefulness (PU)

Perceived Usefulness (PU) is defined as an individual's belief about how much using a technology will enhance performance on an individual basis (B. Wang & Ha-Brookshire, 2018). Perceived Usefulness (PU) used 4 measurement indicators. Consumers find purchasing fresh products online useful because it can improve performance (PU1), save time and money (PU2), make online shopping for fresh agricultural products reliable and useful especially during emergencies (PU3), and make online purchase of fresh agricultural products very practical and efficient (PU4). Based on the results of consumer assessment research the perceived usefulness value of online shopping for fresh agricultural products on the e-commerce TukangSayur.id (Table 2).

Based on Table 2, it is evident that almost all attributes have "agree" (37.5%) and "strongly agree"

(47.9%) values. This suggests that consumers perceive usefulness or benefits from online shopping for fresh agricultural products. The higher consumers perceive the usefulness of technology, the greater the likelihood that they will use it, and vice versa. Conversely, the lower the perceived usefulness by consumers, the less likely they are to use technology (Inthong et al., 2022; Troise et al., 2021; Wang et al., 2022). Based on the results obtained, the most powerful measuring indicator is the usefulness of online purchase of fresh agricultural products. E-commerce can improve performance (PU1), with an average value of 4.45. This means that almost all consumers stated that e-commerce can improve performance. The majority of TukangSayur.id e-commerce consumers are women in the productive age range. The existence of e-commerce is very helpful in providing food supplies at home, especially when work demands are very busy or during unpredictable emergencies. For consumers, the presence of e-commerce for fresh agricultural products can also save time and costs, making it more practical and efficient.

Table 2. Consumer Attitude of Online Fresh Product Purchases in the E-Commerce Tukangsayur.Id

Item	Variable and Indicator	Scale					Average Response
		1	2	3	4	5	
		..... % .....					
	<b>Perceived Usefulness (PU)</b>						
PU1	Online purchase fresh agriculture product very usefulness. It can improve performance.	3.1	5.4	0.0	26.9	64.6	4.45
PU2	Online purchase fresh agriculture product can save time and costs.	0.0	0.8	12.3	40.8	46.2	4.09
PU3	Online shopping for fresh agriculture products is reliable and useful especially during emergencies.	0.0	4.6	18.5	40.0	36.9	4.32
PU4	Online purchase fresh agriculture product. very practical and efficient.	3.8	4.6	5.4	42.3	43.8	4.18
	Average each scale	1.7	3.8	9.0	37.5	47.9	
	<b>Perceived ease of use (PEU)</b>						
PEU1	Easy to buy because the products displayed are clear and complete.	6.9	1.5	4.6	46.9	40.0	4.12
PEU2	Easy to pay when buying products online.	6.9	1.5	2.3	46.2	43.1	4.17
PEU3	Easy to find information on fresh agricultural products marketed online.	4.6	3.8	10.0	42.3	39.2	4.08
PEU4	Easy to understand how to use e-commerce TukangSayur.id.	4.6	3.8	3.1	36.2	52.3	4.28
	Average each scale	5.8	2.7	5.0	42.9	43.7	
	<b>E-commerce Trust (T)</b>						
T1	Sellers on online e-commerce of fresh agriculture products can be trusted.	6.9	1.5	5.4	46.2	40.0	4.11
T2	Sellers on online e-commerce of fresh agricultural products consider the interests of consumers.	6.2	2.3	2.3	44.6	44.6	4.19
T3	Seller adheres to transaction and service commitments.	5.4	3.1	3.8	43.8	43.8	4.18
T4	The seller maintains personal privacy	3.8	4.6	2.3	43.1	46.2	4.23
	Average each scale	4.5	4.0	3.8	41.9	45.8	

## 2. Perceived ease of use (PEU)

Ease of Use (PEU) refers to the consumer's perception that a technology is easy to learn, easy to use, easy to understand, and can be integrated into everyday life (Raninda et al., 2022). In this case, the perceived ease of using the TukangSayur.id e-commerce platform is assessed. It has four indicators used to measure the perceived ease of use variable: ease of buying (PEU1), ease of payment (PEU2), ease of finding information (PEU3), and ease of using the e-commerce platform (PEU4) (Table 2).

Table 2 shows the percentage value of Perceived Ease of Use (PEU) in online purchases of fresh products on the TukangSayur.id e-commerce platform, it is evident that the majority of respondents chose to agree (42.9%) and strongly agree (43.7%) on each indicator. The highest average response is for "easy to understand how to use e-commerce TukangSayur.id," with a value of 4.28. This indicates that the TukangSayur.id is user-friendly, and consumers find it easy to operate, without encountering difficulties when making purchases. The ease of use of e-commerce will make consumers comfortable and create a positive attitude towards making purchases. As stated by Ajzen (2005), the convenience felt by users will have an impact on purchasing intentions and decisions.

Searching for products is easier for consumers because product and price information is displayed clearly and completely. However, consumers often need to confirm the availability of items, as the availability status listed in e-commerce is frequently not updated, thereby hindering transaction ease due to inaccurate information. Nevertheless, other indicators such as ease of making payments and understanding the use of e-commerce have received very good ratings from consumers. The ease of shopping online for fresh agricultural products is likely to foster a positive attitude among consumers toward shopping on the TukangSayur.id for fresh agricultural products. Similar findings were also described by Inthong et al. (2022); Troise et al. (2021) and Wang et al. (2022) which shows that using e-commerce can be used easily.

## 3. E-commerce Trust (T)

E-commerce Trust (T) represents consumer trust in the e-commerce of fresh agricultural products. It comprises four indicators: trustworthy sellers (T1), consideration of consumer interests (T2), compliance

with transaction and service commitments (T3), and protection of personal privacy (T4) (Table 2).

Table 2 displays the percentage value of e-commerce Trust (T) in online purchases of fresh products on the TukangSayur.id, it is evident that the majority of respondents chose to agree (41.9%) and strongly agree (45.8%) on each indicator. This indicates that the TukangSayur.id can be trusted by consumers. Trust is what fosters a positive attitude among consumers towards making purchases. The trust experienced by users will influence their purchasing intentions and decisions (Ding et al., 2022; Nekmahmud et al., 2022; Troise et al., 2021). Products also have great distribution, as well as the quality that consumers expect. Apart from that, TukangSayur.id e-commerce also considers the interests of consumers, as evidenced by the availability of various fresh agricultural products needed by consumers. Consumer trust arises because sellers can comply with transaction commitments and do not violate personal privacy. Consumer data is also not misused. Therefore, consumers feel safe when making transactions. This trust will foster a positive attitude among consumers to shop online for fresh agricultural products on the TukangSayur.id. The findings are also in line with research by Zhou & Liu (2022), research shows that perceived risk has a significant impact on consumer willingness and behavior. Therefore, mitigating perceived risks associated with using online vegetable distribution terminals will enhance consumers' willingness to utilize them and their choice behavior. Customers feel more at ease, confident, and comfortable in making purchases if they perceive reduced risk. This can boost consumer trust in products and brands, ultimately increasing their purchase intentions (Prakash et al., 2023; Zhou & Liu, 2022).

## Online Consumer Intention

### 1. Online Shopping Attitude (ATT)

Online Shopping Attitude (ATT) refers to a person's attitude displayed in response to something. In this research, attitude pertains to consumer responses to online purchases of fresh agricultural products on the TukangSayur.id platform. There are four indicators: feeling comfortable buying fresh agricultural products online (ATT1), feeling happy buying fresh agricultural products online (ATT2), feeling benefited when buying fresh agricultural



products online (ATT3), and feeling that buying fresh agricultural products online is a wise choice and a good idea (ATT4) (Table 3).

Table 3 displays the percentage data for each indicator, it is evident that the majority of respondents chose to agree (36.8%) and strongly agree (51.9%) on each indicator. This indicates that *TukangSayur.id* e-commerce has received a positive consumer response to purchases. A positive attitude tends to generate interest and motivate individuals to make purchases. Consumers with positive traits are what business owners aim to attract to increase product sales. As research conducted by Nekmahmud et al. (2022); Sun & Wang (2020) attitudes towards environmentally friendly products have a positive effect on consumer intentions on social media. That is, when consumers have a positive attitude towards,

they will tend to develop positive intentions to purchase the product. Consumers who have a positive attitude towards products are likely to have a stronger intention to continue purchasing organic food products (Qi et al., 2023).

The majority of respondents, about 36.8%, chose answer 4 (agree), while 51.9% chose answer 5 (strongly agree). This indicates that consumers have a positive attitude towards purchasing fresh products on e-commerce platform. This attitude reflects feelings of liking or disliking something. A consumer's positive attitude towards an item stems from their comfort in shopping, such as having a complete range of products available and feeling happy because they have been aided by the *TukangSayur.id* e-commerce platform, which can save time and costs.

Table 3. Consumer Intention of Online Fresh Product Purchases in the E-Commerce *Tukangsayur.Id*

Item	Variable and Indicator	Scale					Average Response
		1	2	3	4	5	
		..... % .....					
	<b>Online Shopping Attitude (ATT)</b>						
ATT1	Feel comfortable buying farm fresh products online if the products are fully available.	5.4	3.1	1.5	36.9	53.1	4.29
ATT2	Feel good about buying fresh farm products online because it can save time and money.	7.7	0.8	6.2	45.4	40.0	4.09
ATT3	Buying fresh farm products online is profitable because it is practical and efficient.	7.7	0.8	1.5	44.6	45.4	4.19
ATT4	Buying fresh farm products online is a wise choice and good idea.	3.8	4.6	2.3	32.3	56.9	4.42
	Average each scale	4.7	3.8	2.7	36.8	51.9	
	<b>Perceived Risk (PR)</b>						
PR1	The quality of fresh agricultural products marketed online can be trusted	7.7	1.5	1.5	62.3	26.9	3.99
PR2	The services provided by e-commerce are satisfactory	3.8	4.6	3.8	33.1	54.6	4.30
PR3	Prices for fresh agricultural products marketed online are affordable	6.9	1.5	1.5	40.8	49.2	4.24
PR4	Consumer identity is maintained	3.8	5.4	0.0	43.1	47.7	4.25
PR5	The information received is reliable	3.8	5.4	0.0	38.5	52.3	4.30
	Average each scale	4.9	4.0	1.7	43.1	46.4	
	<b>Subjective Norm (SN)</b>						
SN1	Information and product knowledge from friends/family influence purchasing fresh products online.	2.3	2.3	10.8	40.8	43.8	4.22
SN2	Opinions from friends/family influence the decision to purchase farm fresh products online.	1.5	1.5	12.3	40.8	43.8	4.24
SN3	Family/friends support purchasing fresh agricultural products online.	3.1	5.4	0.0	36.2	55.4	4.35
SN4	Many of our family/friends buy fresh farm products online	0.8	3.8	7.7	26.9	60.8	4.43
	Average each scale	2.2	3.7	7.2	35.4	51.5	
	<b>Perceived Behavior Control (PBC)</b>						
PBC1	I can buy farm fresh produce online if I want	8.5	0.0	4.6	41.5	45.4	4.29
PBC2	Ease of buying farm fresh products online.	4.6	3.8	2.3	38.5	50.8	4.09
PBC3	I have the resources. knowledge and ability to purchase farm fresh products online.	3.1	5.4	7.7	43.1	40.8	4.19
PBC4	I have the right to determine the online purchase of farm fresh products.	3.8	4.6	3.1	46.2	42.3	4.34
	Average each scale	5.0	3.5	4.4	42.3	44.8	

Consumers perceive benefits in making purchases on the *TukangSayur.id* e-commerce platform as practical and efficient. Additionally, the majority of consumers consider buying fresh agricultural products online on the *TukangSayur.id* e-commerce platform to be a wise choice. Consumers prioritize purchasing fresh produce online. So, it can be observed that increasing the attitude value of *TukangSayur.id* consumers will result in increased purchasing intentions on the *TukangSayur.id* e-commerce. As per research by Tang et al. (2023), the more positive their attitude towards green consumption, the higher their intention to consume green.

## 2. Perceived Risk (PR)

Perceived Risk (PR) refers to the risk associated with purchasing fresh agricultural products online on the *TukangSayur.id* e-commerce platform. There are 5 indicators, including trustworthy product quality (PR1), satisfactory service (PR2), affordable online prices (PR3), maintained consumer identity (PR4), and trustworthy information (PR5). The percentage values for each indicator can be found in Table 3.

Based on Table 3 regarding the percentage data for each indicator, it is evident that the majority of respondents chose to agree (43.1%) and strongly agree (46.4%) on each indicator. However, two indicators, PR2 (satisfying service) and PR5 (reliable information), show lower agree and strongly agree values. This could potentially lead to a reduction in consumers' positive attitudes towards purchasing. As research conducted by Troise et al. (2021) states that risk can influence user behavior in shopping online. If respondents feel the risk is high, then they will most likely avoid online shopping. The percentage value of each Perceived Risk (PR) indicator can be explained in the following diagram.

Consumers assess the service provided by the e-commerce platform of *TukangSayur.id* as good. However, there are still several indicators that need improvement regarding the services and information received. *TukangSayur.id* is slow in answering questions or responding to complaints from consumers. So, the majority of consumers answered that the service was unsatisfactory. As stated by Hardiyanto & Firdaus (2021), good service quality can influence the creation of purchases. Excellent and responsive service, such as addressing customer complaints if the goods are unsuitable, and ensuring timely responses, can enhance consumer purchasing

intentions. The information provided on the e-commerce platform could be more reliable. This is evident as several products are displayed but are apparently out of stock, requiring consumers to inquire again about their availability.

## 3. Subjective norm (SN)

Subjective Norm (SN) represents the social encouragement felt by an individual, which can influence the intention and purchasing behavior of agricultural fresh products online on the *TukangSayur.id*. Four indicators are utilized to assess a person's subjective norms concerning purchases. These indicators include the influence of information and product knowledge from friends and family (SN1), opinions from friends (SN2), support from family and friends (SN3), and trends among family and friends (SN4). Below are the percentage values for each indicator, as presented in Table 3.

Based on Table 3 regarding the percentage data for each indicator, it is known that the majority of respondents chose to agree (35.4%) and strongly agree (51.5%) on each indicator. This indicates that the influence of the immediate environment, such as family and friends, can significantly impact purchase intentions. As research conducted by Nekmahmud et al. (2022) and Sun & Wang (2020) shows that subjective norms have a positive influence on purchase intentions to buy green products on social media. This shows that the higher the subjective norm, the greater the possibility of having a positive intention to buy green products on social media.

The environment can influence a person's purchase intention towards fresh agricultural products marketed online. Subjective norm (SN) has a positive and significant influence on Purchase Intention (I). An increase in the value of the subjective norm variable will increase the value of the purchase intention variable. This implies that the greater the influence of the environment, such as friends or family, in online shopping for fresh agricultural products, the stronger a person's intention will be to shop online for such products. Information and product knowledge from family and friends can be taken into consideration before making a purchase. Moreover, opinions, suggestions, and support from family and friends also influence online purchasing decisions for farm-fresh products. The widespread use of online shopping by family and friends has become a trend that

encourages people to shop online for fresh agricultural products.

#### 4. Perceived Behavior Control (PBC)

Perceived Behavior Control (PBC) represents consumer confidence in their ability to purchase fresh agricultural products online. Four indicators are used to elucidate Perceived Behavior Control (PBC), namely willingness to buy (PBC1), ease of buying (PBC2), ability to buy (PBC3), and right to determine purchase (PBC4). The percentage values for each indicator of perceived behavior (PBC) can be found in Table 3.

Based on Table 3 regarding the percentage data for each indicator, it is evident that the majority of respondents chose to agree (42.3%) and strongly agree (44.8%) on each indicator. This indicates that consumers' ability to make purchasing decisions originates from within themselves. As in research conducted by Nekmahmud et al. (2022) and Sun & Wang (2020), The PBC results are positive, indicating that the higher the PBC, the greater the likelihood that consumers have a strong intention to buy green products on social media. Perceived Behavior Control (PBC) is one of the factors driving the intention to purchase fresh agricultural products on the *TukangSayur.id* e-commerce platform. An increase in the Perceived Behavior Control (PBC) value will result in a corresponding increase in the Purchase Intention (I) value. This indicates that consumer self-control in product purchasing decisions is influenced by factors such as obstacles, convenience, resources, knowledge, abilities, and individual readiness.

### Online Consumer Decision

#### 1. Online Shopping Intention (I)

Online Shopping Intention (I) is a purchase intention that arises before the decision to purchase fresh agricultural products online occurs. Online Shopping Intention (I) is measured through 4 indicators. 4 indicators, including planning to purchase fresh products online in the near future (I1), considering and prioritizing purchasing fresh products online (I2), planning to switch methods of purchasing fresh products (I3), and planning to consume fresh products online in the near future (I4). The value of each indicator can be seen in the Table 4.

Table 4 shows that the majority of the percentage values for each indicator are 4, indicating agreement (36%), and 5, indicating strongly agree (55%). The stronger the purchase intention, the greater the likelihood of deciding to purchase fresh agricultural products marketed online. Online Shopping Intention (I) is one of the determining factors in the decision to purchase fresh agricultural products on the e-commerce platform *TukangSayur.id*. An increase in the Online Shopping Intention (I) value will lead to a corresponding increase in the Purchase Decision (D) value. This indicates that consumers have positive purchasing intentions for fresh agricultural products on the *TukangSayur.id* e-commerce platform. The strongest indicator of online shopping intentions is the intention to consume fresh agricultural products marketed online, with an average value of 4.39.

Table 4. Consumer Decision of Online Fresh Product Purchases in the E-Commerce *Tukangsayur.Id*

Item	Variable and Indicator	Scale					Average Response
		1	2	3	4	5	
		..... % .....					
	<b>Online Shopping Intention (I)</b>						
I1	planning to purchase fresh products online in the near future	4.6	4.6	0.0	34.6	56.2	4.33
I2	considering and prioritizing purchasing fresh products online	3.1	6.2	1.5	32.3	56.9	4.32
I3	planning to switch methods of purchasing fresh products	3.1	3.1	1.5	40.0	52.3	4.32
I4	planning to consume fresh products online in the near future	4.6	0.0	4.6	40.0	50.8	4.39
	Average each scale	4.0	3.7	1.3	36.0	55.0	
	<b>Purchase Decision (D)</b>						
D1	I will repurchase fresh products online	0.0	0.0	6.2	40.0	53.8	4.48
D2	I usually buy fresh produce online	7.7	9.2	0.0	36.9	46.2	4.05
D3	Continue to use e-commerce in purchasing agricultural products in the future.	0.0	0.0	6.2	30.0	63.8	4.58
D4	Confident that purchasing fresh products online is the best choice	3.1	13.8	0.0	29.2	53.8	4.17
D5	Recommend purchasing fresh products online to others	3.1	13.8	0.0	36.2	46.9	4.10
	Average each scale	2.8	7.4	2.5	34.5	52.9	



## 2. Purchase Decision (D)

Purchase Decision (D) is a consumer purchasing decision for fresh agricultural products marketed online by *TukangSayur.id* e-commerce. There are 5 indicators used to measure consumer purchasing decisions, including repurchasing fresh agricultural products online (D1), the habit of buying fresh agricultural products online (D2), continuing to use e-commerce to purchase fresh products in the future (D3), believing that purchasing fresh products online is the best choice (D4), and recommending purchasing fresh products online to others (D5). The percentage value of each indicator can be found in Table 4.

Table 4 indicates that the majority of respondents' purchasing decision scores are 4 and 5, signifying agreement and strong agreement. The average agreement score is 34.5%, and the average strong agreement score is 52.9%. Consumers' purchasing decisions reflect their actual actions in buying or not buying fresh agricultural products marketed online. Consequently, there has been a surge in online purchasing decisions for fresh agricultural products on the e-commerce platform of *TukangSayur.id*. The following presents the average response for each indicator in the purchase decision (D) variable.

The data indicates that consumers consider online purchasing of fresh agricultural products as the preferred choice. This preference stems from the convenience of online shopping compared to traditional market visits. With online purchases, consumers have the flexibility to transact anytime and anywhere, free from spatial and temporal constraints. Those who engage in online purchases are typically accustomed to buying products through digital platforms.

### Consumer Type and Marketing Strategy

Consumer behavior encompasses the totality of actions, attitudes, and decisions a person takes in the process of selecting, purchasing, using, or disposing of a product or service. When deciding to purchase fresh products online on the *TukangSayur.id* e-commerce platform, there are several types of buyers. Based on the results obtained, it is evident that there are 3 types of buyers and their behaviors, as presented in the following Table 5.

Based on Table 5, it is evident that there are 3 types of buyers in the *TukangSayur.id* e-commerce. Type A represents consumers who have the greatest potential to make purchasing decisions, surpassing those in types B and C. Type A consumers are characterized by their positive attitude towards purchasing. Consumers are confident and have high trust in the e-commerce platform *TukangSayur.id*. Building consumer trust in a product can be an effective strategy for increasing purchase intentions and product sales (Maziriri et al., 2023; Seo et al., 2020). E-commerce *TukangSayur.id* can focus buyers on type A, because these consumers also have the potential to expand market share because consumers provide purchasing recommendations to other people. (Cang & Wang, 2021)

This differs from type B consumers. Type B consumers are still hesitant about using e-commerce to purchase fresh agricultural products. Sometimes, these consumers buy online, and sometimes they opt for offline purchases. This type of buyer does not consistently prioritize online purchases for their kitchen needs. At times, Type B consumers find buying offline to be easier. When consumers do not perceive usefulness, convenience, and value in online services for fresh agricultural products, there is little likelihood of them utilizing such services. However, when consumers perceive the usefulness, convenience, and value, they are more inclined to continue making purchases (Lin et al., 2021).

Type C consumers can be classified as non-potential consumers. These consumers exhibit a negative attitude towards purchasing intentions and decisions. They tend to perceive online purchasing as troublesome and unprofitable. Additionally, Type C consumers have a low level of trust in e-commerce. Consumers assess that the risks that may arise when shopping online will be greater than making direct purchases offline. Type C consumers are not a priority for e-commerce *TukangSayur.id*. However, consumers of this type can be utilized as evaluation material to enhance performance further. Online businesses can boost consumers' online purchasing behavior by improving their perceptions of the advantages and benefits of online purchases, as well as enhancing positive emotional evaluations of online transactions (Peña-García et al., 2020)

Table 5. Consumer Types of Purchase Intentions

Consumer Type	Consumer Type based on the C-TAM-TPB model	Purchase Intention	Purchase Decision
Type A, consumers who have the highest chance of making a purchase	<ul style="list-style-type: none"> <li>• Consumers perceive utility value, benefits from online purchasing of fresh farm products.</li> <li>• Consumers find it easy to use e-commerce for online shopping for fresh agricultural products.</li> <li>• Consumer trust in this type, has high trust in e-commerce <i>TukangSayur.id</i>.</li> <li>• Consumers have a positive attitude towards online purchasing of fresh farm products.</li> <li>• Consumers assess that the risk that occurs is only in customer service and the suitability of information.</li> <li>• Subjective norms such as opinions, suggestions, support from family/friends for type A consumers greatly influence purchasing decisions.</li> </ul>	<ul style="list-style-type: none"> <li>• Consumers buy products when they have time.</li> <li>• Consumers consider future purchases.</li> <li>• Consumer A intends to repurchase the product in the near future</li> <li>• Consumers always prioritize fresh agricultural products marketed online.</li> <li>• Consumers plan to consume fresh agricultural products marketed online.</li> <li>• Consumers will try to consume fresh agricultural products marketed online.</li> </ul>	<ul style="list-style-type: none"> <li>• Consumers make purchases of fresh products online.</li> <li>• Consumers are accustomed to purchasing fresh farm products online.</li> <li>• Consumers are confident in purchasing fresh farm products online.</li> <li>• Consumers are willing to recommend purchasing farm fresh products online to others.</li> </ul>
Type B, consumers who are in the middle between making a purchasing decision or not. Type B consumers are stronger in controlling their own behavior	<ul style="list-style-type: none"> <li>• Utility, the perceived benefit of online purchasing of fresh agricultural products, is not very useful or beneficial.</li> <li>• The perceived ease of using e-commerce for online shopping for fresh agricultural products is relatively easy.</li> <li>• Consumer trust in this type has an average trust in the e-commerce <i>TukangSayur.id</i>.</li> <li>• Consumers sometimes have both positive and negative attitudes towards online purchasing of fresh farm products.</li> <li>• Consumers consider that online shopping for fresh agricultural products is very risky in terms of quality.</li> <li>• Subjective norms such as the influence of friends/relatives do not really influence consumer B.</li> </ul>	<ul style="list-style-type: none"> <li>• Consumers hesitate to make purchases.</li> <li>• Consumers do not consider future purchases.</li> <li>• Consumer B intends to repurchase the product in the near future</li> <li>• Consumers do not always prioritize fresh agricultural products marketed online.</li> <li>• Consumers do not plan to consume fresh agricultural products marketed online.</li> <li>• Consumers will try to consume fresh agricultural products marketed online.</li> </ul>	<ul style="list-style-type: none"> <li>• Consumers are hesitant to purchase fresh products online.</li> <li>• Consumers are less accustomed to purchasing fresh agricultural products online.</li> <li>• Consumers are less confident in purchasing fresh agricultural products online.</li> <li>• Consumers are willing to recommend purchasing farm fresh products online to others.</li> </ul>
Type C, consumers who have the lowest chance of making a purchase	<ul style="list-style-type: none"> <li>• Consumers do not perceive utility value, benefits from purchasing fresh agricultural products online.</li> <li>• Consumers do not find it easy to use e-commerce online shopping for fresh agricultural products.</li> <li>• Consumer trust in this type has very low trust in the e-commerce of <i>TukangSayur.id</i>.</li> <li>• Consumers have a negative attitude towards purchasing fresh farm products online.</li> <li>• Consumers consider that there is a large risk of online shopping for fresh agricultural products.</li> <li>• Subjective norms such as the influence of friends/relatives do not really influence consumers C.</li> <li>• Type C consumers are stronger in controlling their own behavior.</li> </ul>	<ul style="list-style-type: none"> <li>• Consumers do not purchase products when they have the time.</li> <li>• Consumers do not consider future purchases.</li> <li>• Consumer C has no intention of repurchasing the product in the near future</li> <li>• Consumers always prioritize fresh agricultural products marketed online.</li> <li>• Consumers do not plan to consume fresh agricultural products marketed online.</li> <li>• Consumers will not try to consume fresh agricultural products marketed online</li> </ul>	<ul style="list-style-type: none"> <li>• Consumers do not want to repurchase fresh products online.</li> <li>• Consumers are less accustomed to purchasing fresh agricultural products online.</li> <li>• Consumers are less confident in purchasing fresh agricultural products online.</li> <li>• Consumers are unwilling to re-consume fresh farm products online.</li> <li>• Consumers are unwilling to recommend purchasing farm fresh products online to others</li> </ul>

The three types are grouped based on the results of descriptive analysis, which highlight the best indicators from each measure. When linked to the C-TAM-TPB theory, type A is characterized as a consumer who has a positive experience using online technology (TukangSayur.id e-commerce) and exhibits favorable behavior towards purchasing. TAM will elucidate how consumers embrace technology, while TPB will illuminate how consumers behave concerning purchasing. Does it tend to be positive or negative? (Ajzen, 2005; Marikyan & Papagiannidis, 2022). Type B is consumers who are hesitant about purchasing and also do not think that shopping using online technology provides benefits. Type C consumers lack a positive online shopping experience and exhibit negative attitudes towards purchases. Consequently, the company does not prioritize Type C consumers when developing marketing strategies.

### Research Implication

Following an analysis of consumer purchasing intentions and decisions concerning fresh agricultural products on the TukangSayur.id e-commerce platform, managerial implications are drawn, aiming to enhance the company's management practices. It is crucial for companies to understand the factors influencing purchasing decisions. In this way, companies can plan and implement appropriate marketing strategies to improve purchasing decisions and increase company profits. Managerial implications are derived from theory and analysis results derived from conducted research. Strategy formulation is presented by the percentage of each indicator within each variable

Through the C-TAM-TPB theory, such as utility value, convenience value, trust, attitude, subjective norms, risk, and behavioral control have an impact on purchasing intentions and decisions. Consumers consider convenience, usability, and trust in the shopping system before making a purchase. The positive attitude towards using technology exhibited by online e-commerce consumers at TukangSayur.id has been demonstrated to shape positive intentions and influence purchasing decisions. Similarly, the impact of risk, subjective norms, and behavioral control on purchasing intentions and decisions is noteworthy.

Three types of consumers are identified from the results of this research: type A consumers, type B consumers, and type C consumers. Type A consumers,

who exhibit the greatest purchasing potential, demonstrate a positive attitude towards purchasing and express confidence and high trust in the e-commerce platform TukangSayur.id. Building consumer trust in a product can serve as an effective strategy for enhancing both product purchases and sales intentions (Maziriri et al., 2023; Seo et al., 2020)

The findings of this research propose several suggestions to the e-commerce owner of TukangSayur.id. First, TukangSayur.id should focus on type A buyers, as these consumers have the potential to expand market share by providing purchasing recommendations to others. (Cang & Wang, 2021). e-commerce TukangSayur.id maintains good relationships with type B consumers, and uses type C consumers as evaluation material regarding the factors that make consumers not want to shop online so that they can improve services.

Secondly, TukangSayur.id e-commerce should prioritize prompt responses and excellent service for consumers. Fast response and good service from sellers or business owners can enhance consumers' purchasing intentions (Hardiyanto & Firdaus, 2021; Liao et al., 2022). When providing good service, both online and offline, business people can build a positive image and increase consumer purchasing intentions.

Thirdly, TukangSayur.id e-commerce must ensure the completeness and accuracy of product information to avoid fostering negative attitudes and diminishing consumer purchase intentions. Ensuring the suitability of information and product completeness will sustain consumer trust in e-commerce and consistently foster a positive purchasing attitude. The completeness of products can significantly influence purchasing decisions and consumer loyalty (Adrian et al., 2022).

### CONCLUSION AND SUGGESTION

Based on the findings from the conducted research, conclusions are drawn to address the objectives. In general, the characteristics of online consumers of fresh agricultural products on the TukangSayur.id e-commerce platform are predominantly female and married, with an income level ranging from IDR6,000,000 to IDR10,000,000 and an age range of 26 to 35 years. Additionally, the majority of consumers have attained a diploma or graduate-level education.

There are three types of consumer behavior when purchasing fresh agricultural products in e-commerce:

type A, type B, and type C. The most influential in purchasing decisions is type A, which constitutes the majority of consumers. Type A consumers exhibit a positive attitude towards purchasing, demonstrating confidence and trust in products and services. As a result, e-commerce platforms can attract more customers through type A consumers, as they are likely to provide positive recommendations to others.

Types B and C can serve as evaluation materials to enhance performance. There are several indicators that the e-commerce business owner of *TukangSayur.id* should prioritize, including customer service and providing accurate information regarding product availability.

Based on the research results, it is recommended for business owners to enhance their performance or services to consumers, such as providing prompt responses and excellent service. *TukangSayur.id* e-commerce should pay attention to product completeness and accuracy of information to avoid negative attitudes and mitigate a decrease in consumer purchasing intentions. Additionally, *TukangSayur.id* e-commerce is expected to uphold product quality and delivery speed to maintain consumer perceptions that purchasing fresh agricultural products online is a prudent and beneficial choice.

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