ONLINE GROCERY SHOPPING BEHAVIOR MODEL IN PEKANBARU CITY USING THE TECHNOLOGY ACCEPTANCE MODEL (TAM)

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Abstract. *This research aims to see the acceptance of Pekanbaru City consumers towards online grocery shopping through e-grocery applications using the framework of the Technology Acceptance Model (TAM). Quantitative descriptive method was used in this research with purposive sampling technique. Respondents in this study were 174 women aged 18 years and over who had done online food shopping. The Structural Equation Modeling-Partial Least Squares (SEM-PLS) approach was used to analyze the respondent's answer data. The results of this study indicate that there is an influence of Perceived Ease of Use (PEU) on Perceived Usefulness (PU). Attitude (ATT) is influenced by Perceived Usefulness (PU) and Perceived Ease of Use (PEU). Furthermore, Behavioral Intention (BI) is significantly influenced by Perceived Usefulness (PU) and Attitude (ATT). Meanwhile, no effect of Perceived Ease of Use (PEU) on Behavioral Intention (BI) was found. The originality of this research lies in the use of the Technology Acceptance Model (TAM) model in the case of food shopping through e-grocery applications in Pekanbaru city with all female respondents. This research is expected to contribute to the field of consumer behavior, especially in the context of online grocery shopping through e-grocery applications in Pekanbaru City.*

Keywords: *Attitude; Behavioral Intention; E-grocery; Perceived Usefulness; Perceived Ease of Use; Technology Acceptance Model (TAM)*

1. INTRODUCTION

The development of smartphones has opened up many opportunities for sellers to develop their businesses. This phenomenon is evident in the e-commerce industry, which has experienced a significant surge thanks to the advancement of smartphones. The development of e-commerce businesses in Indonesia has indeed experienced a rapid increase, especially during the COVID-19 pandemic (Kurniasari & Riyadi, 2021). One sub-sector that has benefited from this trend is e-grocery, where online grocery shopping has become popular. Online grocery shopping has become an effective solution to fulfill daily needs during the COVID-19 pandemic. (Rout et al., 2022). However, after the COVID-19 pandemic ended, the positive trend of shopping through e-grocery did not continue. Several factors may influence this change, one of which is the aspect of technology acceptance by consumers. Although there has been early adoption of online food purchases, new challenges have emerged post-pandemic that have made consumers less enthusiastic or skeptical of this business model.

This is certainly in stark contrast to the benefits offered by e-grocery. E-grocery allows customers to fulfill their daily needs without sacrificing time to leave their routine activities. With the increasingly busy lifestyles that many consumers have today, shopping online should be a desirable option (Poon &Tung, 2022). In addition, e-grocery services have evolved according to consumer needs and preferences. Current service developers have paid close attention to the user-friendly aspect so that the online shopping process becomes easier and more efficient for users without requiring high technical skills. This means that e-grocery offers convenience and greater

accessibility for all groups, increasing its appeal as a practical shopping solution in everyday life.

In this study, one of the widely used consumer behavior theories was used to see the perception of e-grocery users in Pekanbaru City towards technology. The theory used is the Technology Acceptance Model (TAM). TAM is the most widely used behavioral model to explain the acceptance and use of new technology (Bauerova & Klepek, 2018; Riyadi & Kurniasari, 2021). TAM provides a picture that isused to determine the reasons why a technology is not accepted (Kasuma et al., 2021). In the case of online grocery shopping, there is a tendency for this technology to be unopposed by users due to various factors, such as convenience, trust, and skills (Anesbury et al., 2016; Anitha & Krishnan, 2022).

Through the TAM approach, it can be understood that the success of technology adoption, such as e-grocery, depends not only on the availability of the technology itself but also on user perceptions of its usefulness and ease of use. Therefore, this study was conducted to understand the factors that influence consumer acceptance in Pekanbaru City towards e-grocery post-pandemic so that business strategies can be adjusted to overcome existing obstacles and improve their impact on the development of the e-grocery business as a whole.

2. LITERATURE REVIEW

A. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a framework that explains the factors that influence how users accept and use technology. This model was first developed by Davis (1989) due to the expansion of the Theory of Reasoned Action proposed by Fishbein and Ajzen (1975). User intention in TAM is described through three main components, namely perceived ease of use, perceived usefulness, and attitude (Bauerova & Klepek, 2018; Driediger & Bhatiasevi, 2019; Granic & Marangunic, 2019; Nguyen et al., 2019). As an evolution of the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM) also recognizes that attitude mediates between belief and intention. TAM has become an important foundation in understanding user behavior toward technology, helping researchers and practitioners identify and address factors influencing technology adoption more effectively.

B. Behavioral Intention

Behavioral Intention in this study refers to the measure of the possibility that someone will carry out specific behavior in the context of information technology (Bauerova & Klepek, 2018). If the behavior is considered reasonable, the possibility of carrying out the behavior will be greater. A positive assessment of a behavior will increase the possibility of carrying out the behavior (Poon & Tung, 2022). This Behavioral Intention is closely related to the actual behavior that will be carried out. Thus, through the assessment of Behavioral Intention, it is possible to identify the possibility of someone acting (Nguyen et al., 2019). Intention is a form of assessment of motivational factors that influence an action (Ajzen, 1991). The role of psychological and situational determinants of consumer behavioral intentions in the context of grocery shopping via apps is important to understand (Al Amin et al., 2022). In this study, the situational determinants assessed are the benefits and convenience felt from the e-grocery application.

C. Perceived Usefulness (PU)

Perceived usefulness (PU) is the extent to which users believe that using a particular technology will improve their performance. (Davis, 1989; Venkatesh & Davis, 2000). Perceived usefulness is referred to as the primary determinant that influences behavioral intention. Users ' acceptance and utilization of a new technology system can be known through their perception of the benefits they feel towards the system

(Venkatesh & Davis, 2000). Consumers can feel perceived usefulness in the form of increased experience and effectiveness in shopping for the context of shopping for groceries online (Warganegara & Hendijani,2022). The experience felt, 2 and its benefits will influence consumers' attitudes as system users. Consumers who believe in the benefits of grocery shopping will have a positive attitude towards it (Jasti & Syed, 2019). The influence given by perceived usefulness (PU) on attitude (ATT) can be seen in many previous studies which confirm this influence (Bauerova & Klepek, 2018; Driediger & Bhatiasevi, 2019; Kurnia & Chien, 2003; Troise et al., 2021). Based on the above explanation, the proposed hypothesis is as follows:

H1: Perceived usefulness (PU) positively and significantly affects attitudes (ATT) towards online grocery shopping in Pekanbaru City.

Perceived usefulness has strongly influenced consumer intentions to shop online (Davis, 1989; Ruangkanjanases et al., 2021). Consumers will first see the benefits compared to other factors in shopping through e-grocery (Chakraborty, 2019). The relationship between these variables can be found in much literature (Chakraborty, 2019; Saleem et al., 2022; Sitorus & Vania, 2022), so that the formulated hypothesis is:

H2: Perceived usefulness (PU) positively and significantly affects Behavioral Intention (BI) in online grocery shopping in Pekanbaru City.

D. Perceived Ease of Use (PEU)

Perceived ease of use (PEU) is the extent to which users believe using a particular technology will not cause difficulties (Davis, 1989). Simply put, perceived ease of use refers to the consumer's expectation of ease in obtaining product information without spending much effort and time (Saleem et al.,2022). TAM states that perceived usefulness is influenced by perceived ease of use (Venkatesh & Davis, 2000; Warganegara & Hendijani, 2022). An information technology system will be more valuable if it is easy to use (Venkatesh & Davis,2000). Perceived ease of use is the primary determinant of the perceived usefulness variable (Marangunić & Granić, 2015). The relationship between these two variables was found in many studies that have been conducted previously (Nguyen et al., 2019; Troise et al., 2021; Warganegara & Hendijani, 2022). The hypothesis proposed based on the above explanation is explained as follows:

H3: Perceived ease of use (PEU) positively and significantly affects perceived usefulness (PU) in online grocery shopping in Pekanbaru City.

Consumers will feel positive when a technology is easy to use (Shukla &Sharma, 2018; Warganegara & Hendijani, 2022). The positive influence on the relationship between perceived ease of use (PEU) and attitude (ATT) can be seen in many studies that have been conducted (Chakraborty, 2019; Saleem et al., 2022; Shukla & Sharma, 2018). Thus, the proposed hypothesis is as follows:

H4: Perceived ease of use (PEU) positively and significantly affects attitudes (ATT) towards online grocery shopping in Pekanbaru City.

Ease of use will strengthen consumer intention to use technology (Driediger & Bhatiasevi, 2019). The positive influence of perceived ease of use (PEU) on behavioral Intention (BI) can be found in previous research (Chakraborty, 2019; Driediger & Bhatiasevi, 2019; Sitorus & Vania, 2022). If we refer to the previous explanation and the positive influence that we can find in previous research, then the hypothesis used to describe the relationship between PEU and BI is as follows:

H5: Perceived ease of use (PEU) positively and significantly affects Behavioral Intention (BI) in online grocery shopping in Pekanbaru City.

E. Attitude (ATT)

An attitude is a form of a person's self-perception regarding whether or not to carry out a specific behavior (Adiyoso & Wilopo, 2021; Tyrväinen & Karjaluoto,2022). Attitude is a fixed tendency to carry out subsequent behavior (Qi et al., 2021). The experiences that consumers get greatly influence their intentions. Consumers' past experiences can produce varied intentions (Nawi et al., 2019). Attitude factors that influence behavioral intentions can be found in many previous studies (Chakraborty, 2019; Kurnia & Chien, 2003; Nguyen et al., 2019). Based on the explanation of the relationship between attitude (ATT) and behavioral intention, the hypothesis proposed is as follows:

H6: Attitude (ATT) positively and significantly affects Behavioral Intention (BI) in online grocery shopping in Pekanbaru City.

3. RESEARCH METHODS

This study was conducted between August and October 2023. The sampling technique used was a non-probability sampling technique. The type of sampling used was purposive sampling, with the number of questions in the questionnaire totaling 16. The criteria for the respondents selected were consumers who had shopped for groceries online. The respondents obtained were 174 female samples aged 18 years living in Pekanbaru City. The results were analyzed using the Structural Equation Modeling-Partial Least Squares (SEM-PLS) method and SmartPLS 3 software. The variables and indicators used in this study are described in the following variable operational definition table:

Table 1. Operational Definition of Variables

Variables	Definition	Indicator	Scale
***Perceived Usefulness* (X1)**	Perceptions of functional benefits, such as perceived time savings, usefulness of applications, effectiveness, efficiency, and suitability of a technology to needs, are what is meant by perceived usefulness.	1. Time saving 2. Effectiveness 3. Efficiency 4. Usefulness of the application 5. Compliance (Bauerova & Klepek, 2018; Driediger & Bhatiasevi, 2019; Nguyen et al., 2019)	Likert
***Perceived Ease of Use* (X2)**	Perceived ease of use refers to views on how easy the online grocery shopping system is to use, the operational complexity of the system, and the ease of learning to use the system.	1. Ease of Use 2. Complexity 3. Ease of Learning (Bauerova & Klepek, 2018; Driediger & Bhatiasevi, 2019; Nguyen et al., 2019)	Likert

Attitude (X3)	Attitudes in this study reflect beliefs about perceived benefits, individual evaluations of the wisdom of the behavior, and feelings or emotions such as satisfaction and individual beliefs about the possible outcomes or consequences of using a grocery store app.*on line*.	1. Belief in Benefits 2. Wisdom 3. Pleasure 4. Confidence in Results (Bauerova & Klepek, 2018;Nguyen et al., 2019)	Likert
Behavioral intention (Y1)	Behavioral intention is related to the respondent's motivation which is reflected in the intensity of desire, the tendency to carry out the behavior, the clarity of intention which shows how much the individual is willing to actually carry out the behavior, and the planned intention which is reflected in usage habits.	1. Strong Desire 2. Action Tendency 3. Clarity of Intention 4. Routine (Bauerova & Klepek, 2018; Driediger & Bhatiasevi, 2019; Nguyen et al., 2019)	Likert

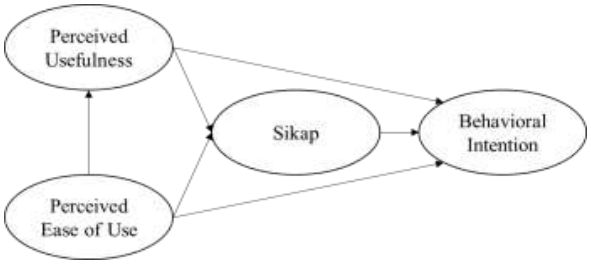
Source: Processed Data, 2024

Descriptive analysis was conducted in this study. Descriptive analysis is used to understand the position of a variable without making comparisons or investigating correlations between the variable and other variables. This analysis is carried out by changing the raw data from the questionnaire results into a more representative form, such as averages and percentages. In general, this descriptive study aims to provide a comprehensive picture of aspects relevant to the phenomenon being observed. The results of the Descriptive analysis is then used to assess aspects that need improvement or even enhancement, especially if the condition is already good.

The Structural Equation Modeling-Partial Least Squares (SEM-PLS) analysis in this study consists of outer and structural model testing (inner model). Outer model testing in this study was tested with validity and reliability tests. Validity tests consist of convergent validity (loading factor, average variance extracted) and discriminant validity (Fornell-larger criterion, cross-loading, Heterotrait-Monotrait ratio (HTMT)). The threshold value required for convergent validity testing is 0.7 for the loading factor and 0.5 for the average variance extracted (Hair et al., 2017).

In discriminant validity testing, the square root value of AVE in the Fornell-larger criterion test must be greater than the correlation with other latent variables. The outer loading value of an indicator on a variable in the cross-loading test must be greater than its cross-loading on other variables (Hair et al., 2017). For the hetero trait-mono trait ratio (HTMT), the value must be below 0.85 (Hair et al., 2017). Meanwhile, the reliability test is done by assessing the composite reliability and Cronbach's alpha. The composite reliability value that must be achieved so that the model can be said to be reliable is more significant than 0.7, and Cronbach's alpha value obtained is in the range of around 0.70 to 0.90 and can be considered satisfactory (Hair et al., 2017). Meanwhile, the inner model testing consists of R-square, f-square, and Predictive Relevance ($Q^2 > 0$) tests.

Figure 1. Research Model



Source: The Squirrel (2018)

4. RESEARCH RESULTS

The sample obtained for this study was 174 women who had shopped through e-grocery. The female sample used in this study was closely related to their role in shopping for household needs (Gomes & Lopes, 2022; Hansen et al., 2004). The complete sample characteristics results are presented in the table below:

Table 2. Demographic Characteristics of Respondents (N = 174)

Characteristics	Category	Frequency	Percentage
Age	18 – 24 years	69	33%
	25 – 34 years	89	43%
	35 – 44 years	37	18%
	45 – 55 years	11	5%
	Above 55 years	2	1%
	Total	**208**	**100%**
Education	Senior High School	24	12%
	Diploma	17	8%
	Bachelor	119	57%
	Master/Doctor	48	23%
	Total	**208**	**100%**
Work	Housewife	39	19%
	Employee	54	26%
	Student	60	29%
	Government employees	36	17%
	Self-employed	19	9%
	Total	**208**	**100%**
Ever used	Yes	174	84%
	No	34	16%
	Total	**208**	**100%**

Source: Processed Data, 2024

The results of the descriptive analysis of the variables can be seen in the table below:

Table 3. Descriptive Analysis of Variables

Variables	Mean	Category
PU	4.02	Good
PEU	4.17	Good
ATT	3.77	Good
BI	3.38	Enough

Source: Processed Data, 2024

The behavioral intention variable is the variable with the lowest average answer value. The average value of the respondents' answers obtained was 3.38. Respondents'

behavioral intention was still low when viewed from the descriptive analysis. While the result with the highest average is the perceived ease of use variable. If we look at the characteristics of the respondents, most of the respondents are aged between 18-24 years (33%) and 25-34 years (43%). The age of the respondents who are classified as young affects their ability to use e-grocery applications. In addition, the education level of most respondents is undergraduate (57%). Respondents can easily use and learn e-grocery applications. The complexity and skills required in using e-grocery applications are not too great.

Respondents' answers were analyzed using the Structural Equation Modeling-Partial Least Squares (SEM- PLS) method with SmartPLS 3 software. The loading factor value for the validity test obtained all indicators have a value above 0.7. The indicators in this study are declared valid for use in measuring variables. The Average Variance Extracted (AVE) value obtained is above the threshold value of 0.5 and indicates that the variables are valid for use in this study.

Table 4. Loading Factor Value

	BI	ATT	PEU	PU	Caption
X11				0.759	Valid
X12				0.842	Valid
X13				0.814	Valid
X14				0.823	Valid
X15				0.755	Valid
X21			0.842		Valid
X22			0.743		Valid
X23			0.861		Valid
X31		0.821			Valid
X32		0.867			Valid
X33		0.831			Valid
X34		0.841			Valid
Y1	0.887				Valid
Y2	0.902				Valid
Y3	0.864				Valid
Y4	0.893				Valid

Source: Processed Data, 2024

Table 5. Average Variance Extracted (AVE) Value

Variables	AVE	Caption
Attitude (ATT)	0.705	Valid
Behavioral Intention (BI)	0.786	Valid
Perceived Ease of Use (PEU)	0.667	Valid
Perceived Usefulness (PU)	0.639	Valid

Source: Processed Data, 2024

The results of the discriminant validity test also show that the variables in this study are valid for use. The Heterotrait - Monotrait Ratio (HTMT) value that can be seen in the matrix below shows a good value. The HTMT value below 0.85 indicates that the variables measure different phenomena (Henseler et al., 2015).

Table. 6 Fornell-Larcker Criterion Value

	ATT	BI	PEU	PU
ATT	**0.840**			
BI	0.702	**0.887**		
PEU	0.660	0.516	**0.817**	
PU	0.731	0.604	0.636	**0.799**

Source: Processed Data, 2024

Table 7. Heterotrait - Monotrait Ratio (HTMT) Value

	ATT	BI	PEU	PU
ATT				
BI	0.793			
PEU	0.826	0.620		
PU	0.845	0.678	0.789	

Source: Processed Data, 2024

Reliability testing in the form of Composite Reliability and Cronbach's Alpha tests showed that the value was above the required threshold of 0.7. The construct can be said to be reliable for use in research (Hair et al., 2017).

Table 8. Reliability Test

Variables	Composite Reliability	Cronbach's Alpha	Caption
Attitude (ATT)	0.905	0.861	Reliable
Behavioral Intention (BI)	0.936	0.909	Reliable
Perceived Ease of Use (PEU)	0.857	0.749	Reliable
Perceived Usefulness (PU)	0.898	0.858	Reliable

Source: Processed Data, 2024

The results of the inner model test in the form of R-Square obtained the variable perceived usefulness (PU) is influenced by perceived ease of use (PEU) by 40.4%, attitude (ATT) is influenced by the variables perceived usefulness (PU) and perceived ease of use (PEU) by 59.9% and behavioral intention (BI) is influenced by the variables perceived usefulness (PU), perceived ease of use (PEU) and attitude (ATT) by 51.2%. This R-Square value can be explained through the f-Square test as can be seen in the table below. The effect given by the variable perceived ease of use (PEU) on the variable perceived usefulness (PU) has a high value of 0.679. The effect given to the attitude (ATT) by perceived ease of use (PEU) is medium at 0.160 and the variable perceived usefulness (PU) has a high value of 0.407. The magnitude of this effect causes the R-Square value of the Attitude variable (ATT) to be the highest. Meanwhile, the effects given by the variables perceived usefulness (PU), perceived ease of use (PEU) and attitude (ATT) on behavioral intention (BI) have smaller values.

Table 9. R-Square Value

Variables	*R Square*	%
Attitude (ATT)	0.599	59.9%
Behavioral Intention (BI)	0.512	51.2%
Perceived Usefulness (PU)	0.404	40.4%

Source: Processed Data, 2024

Table 10. f-Square Value

	ATT	BI	PEU	PU
ATT		0.242		
BI				
PEU	0.160	0.002		0.679

PU	0.407	0.028		

Source: Processed Data, 2024

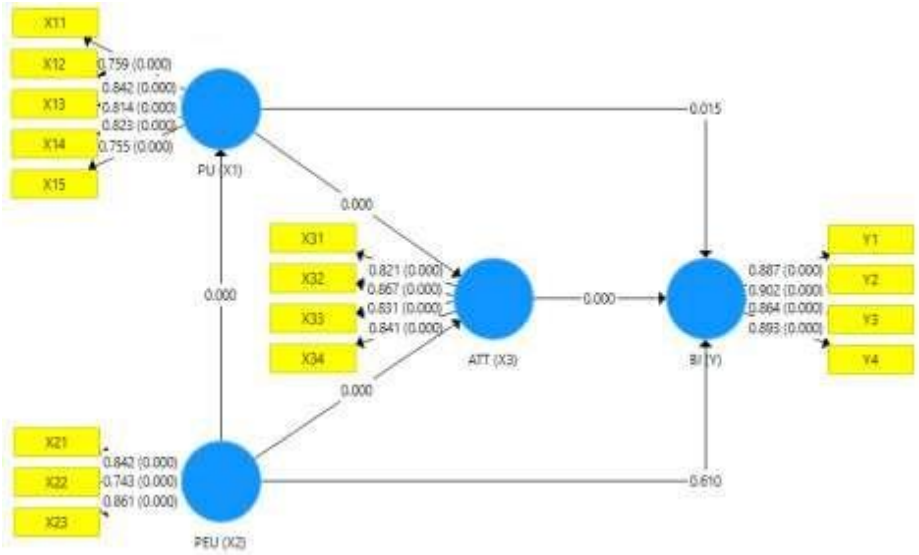
Hypothesis submission was conducted using bootstrapping method to 5,000 samples. Based on the test results, a significant relationship was obtained on the influence between PU variables on ATT (H1), PU on BI (H2), PEU on PU (H3), PEU on ATT (H4) and ATT on BI (H6). In the relationship between PEU and BI, no significant influence was found, so hypothesis 5 was rejected.

Table 11. Hypothesis Testing

Hypothesis	Connection	Original Sample (O)	Sample Mean (M)	T Statistics (|O/STDEV|)	P Values	Influence	Hypothesis Testing
H1	**PU -> ATT**	0.523	0.525	9,442	0.000	*Significant*	Accepted
H2	**PU -> BI**	0.180	0.179	2,419	0.016	*Significant*	Accepted
H3	**PEU -> PU**	0.636	0.637	14,478	0.000	*Significant*	Accepted
H4	**PEU -> ATT**	0.328	0.325	5,786	0.000	*Significant*	Accepted
H5	**PEU -> BI**	0.043	0.044	0.500	0.617	*Not Significant*	Rejected
H6	**ATT -> BI**	0.542	0.544	6,324	0.000	*Significant*	Accepted

Source: Processed Data, 2024

Figure 2. Structural Equation Modeling-Partial Least Squares (SEM-PLS) Analysis Results.



Source: Processed Data, 2024

The mediation effect test found the ability of the variables perceived usefulness (PU) and attitude (ATT) to be mediators of the influence of other variables. Attitude (ATT) mediates the relationship between PEU and BI in full mediation and the relationship between PU and BI in partial mediation. Meanwhile, perceived usefulness (PU) becomes a mediator in the relationship between PEU and BI in full mediation and the relationship between PEU and ATT in partial mediation.

Table 12. Mediation Effect

Connection	*P Values*	*Indirect Effect*	Connection	*P Values*	*Direct Effect*	*Mediation Effect*
PEU→ATT→BI	0.000	Significant	**PEU -> BI**	0.617	Not Significant	Full Mediation
PU→ATT→BI	0.000	Significant	**PU -> BI**	0.016	Significant	Partial Mediation
PEU→PU→BI	0.018	Significant	**PEU -> BI**	0.617	Not Significant	Full Mediation
PEU→PU→ATT	0.000	Significant	**PEU -> BI**	0.000	Significant	Partial Mediation
PEU→PU→ATT →BI	0.000	Significant	**PEU→PU→ ATT**	0.000	Significant	Partial Mediation

Source: Processed Data, 2024

The full mediation effect was obtained in relation to the direct influence between PEU and BI found to be insignificant. The PEU variable affects BI indirectly through the ATT and PU variables. When viewed from the total effect given, there is a significant increase in the total effect of the PEU variable on BI, which is 0.473.

Table 13. Total Effect Coefficient Value

Variables	Path Coefficients			Indirect Effects			Total Effects		
	ATT	**BI**	**PU**	**ATT**	**BI**	**PU**	**ATT**	**BI**	**PU**
ATT		0.542						0.542	
BI									
PEU	0.328	0.043	0.636	0.333	0.473		**0.660**	**0.516**	0.636
PU	0.523	0.180			0.284		0.523	**0.464**	

Source: Processed Data, 2024

The change in total effect can be seen from the comparison of the total effect table below with the previous hypothesis testing table. The relationship between PEU and BI changed to be significant as a result of the indirect relationship with other variables. PEU affects BI indirectly through PU, ATT and the combination of PU and ATT. Meanwhile, the relationship between PEU and ATT also increased due to the indirect influence of PEU through PU on ATT.

Table 14 Total Effect

Hypothesis	Connection	Original Sample (O)	Sample Mean (M)	T Statistics (|O/STDEV|)	P Values	Influence	Hypothesis Testing
H1	**PU→ATT**	0.523	0.524	9.395	0.000	*Significant*	Accepted
H2	**PU→BI**	0.464	0.465	6,676	0.000	*Significant*	Accepted
H3	**PEU→PU**	0.636	0.638	14,812	0.000	*Significant*	Accepted
H4	**PEU→AT**	0.660	0.661	15,467	0.000	*Significant*	Accepted
H5	**PEU→BI**	0.516	0.517	8,440	0.000	*Significant*	Accepted
H6	**ATT→BI**	0.542	0.543	6.313	0.000	*Significant*	Accepted

Source: Processed Data, 2024

4.Results and Discussion

This study shows that the Technology Acceptance Model theory can be used in the context of online grocery shopping through e-grocery applications in Pekanbaru City. These results validate that this theory can be used in the context of e-grocery in many different locations (Nguyen et al., 2019). Among the several relationships between these variables, several notes can be found regarding the relationship. Perceived usefulness was found to have an influence on attitudes in this study. Based on the results of research byArslan & Turan (2022). It is stated that consumers who consider e-grocery

applications useful will certainly develop a good attitude towards it. The time-saving aspect offered by e-grocery applications can be a benefit felt by consumers in purchasing groceries. Similar results on the influence of perceived usefulness on attitudes were found in other studies (Anitha & Krishnan, 2022; Nguyen et al., 2019; Shukla & Sharma, 2018).

Perceived usefulness has a greater influence on attitudes than perceived ease of use (Warganegara & Hendijani, 2022). Although other studies have found different results, namely that perceived ease of use has a greater influence (Loketkrawee & Bhatiasevi, 2018; Nguyen et al., 2019). Consumers who are already accustomed to information technology systems and e-grocery applications that are easy to use are the main factors (Loketkrawee & Bhatiasevi, 2018; Nguyen et al., 2019). The developer continues to update the application so that it is easier to use and learn by consumers widely. Although there are differences in the magnitude of their influence, these two determinants still show the consistency of the TAM model to test consumer usage intentions (Loketkrawee & Bhatiasevi, 2018).

In addition to influencing attitudes, perceived usefulness also has a direct impact on behavioral intention. Perceived usefulness influences consumer behavioral intention in this study. These results support the results of previous studies (Kurnia & Chien, 2003; Ruangkanjanases et al., 2021; Warganegara & Hendijani, 2022). The benefits obtained by consumers such as saving time, ease of shopping and minimal effort made the consumer's intention to use e-grocery applications increase (Sitorus & Vania, 2022). Different results were found in research by Nguyen et al. (2019), which found that PU affects BI only through attitude. In this study, it was found that PU directly affects BI and also through attitude as a mediator. This shows that Perceived usefulness can also affect behavioral intention through positive attitudes that arise towards e-grocery. Consumers will prefer to use e-grocery if they think it is convenient to do so (Ruangkanjanases et al., 2021). Positive responses from consumers will encourage their intention to use e-grocery. Another determinant of behavioral intention from the TAM model is perceived ease of use. In addition to influencing attitudes and behavioral intention, perceived ease of use also influences perceived usefulness based on the TAM construct (Davis, 1989). The influence of perceived ease of use on perceived usefulness was found in this study. The ease of use and learning of e-grocery applications makes consumers think that the application is useful (Driediger & Bhatiasevi, 2019). Similar results were found in other studies (Driediger & Bhatiasevi, 2019; Kasuma et al., 2021; Warganegara & Hendijani, 2022). E-grocery applications that are easy to use and learn will save time and minimize the effort that must be spent by consumers. So, this is seen as a benefit by consumers, which will then increase the intention to apply e-grocery in consumers' daily lives.

In addition to having an impact on perceived usefulness, the ease found by consumers in e-grocery applications will affect consumer attitudes towards e-grocery applications. The influence of perceived ease of use on attitudes can be explained in this study. Positive assessments related to online grocery shopping will be formed when consumers consider it easy to use (Warganegara & Hendijani, 2022). This finding is able to prove the same findings in previous research (Karim et al., 2021; Kurnia & Chien, 2003; Shukla & Sharma, 2018). Consumers agree that this e-grocery application is easy to use, not complicated and easy to learn. The minimal effort that needs to be spent by consumers will foster a positive attitude towards the e-grocery application. However, the influence of perceived ease of use on the attitude variable was not found in the study by Troise et al. (2021). In this study, consumer perception of perceived ease was influenced by other variables (Troise et al., 2021).

The influence of perceived ease of use on behavioral intention was not found in this study. The same results as in this study can also be seen in other studies (Bauerova & Klepek, 2018; Jasti & Syed, 2019;Ryadi et al., 2021). Perceived ease of use will influence behavioral intention through perceived usefulness (Bauerova & Klepek, 2018; Jasti & Syed, 2019; Shukla & Sharma, 2018) and attitude (Kurnia & Chien,

2003;Nguyen et al., 2019; Saleem et al., 2022). In research by The Last Supper (2018), a model is proposed that shows the relationship between perceived ease of use and behavioral intention through perceived usefulness. This relationship can be explained with certainty in this study which shows the significant role of perceived ease of use on behavioral intention. Convenience can still influence consumer intention to use e-grocery applications.

The influence of attitude on behavioral intention was obtained in this study. Attitude is the main determinant that connects beliefs with intentions (Fishbein & Ajzen, 1975). Therefore, the influence of attitude on behavioral intention can be found in other studies (Saleem et al., 2022). Attitude can be a facilitator of the benefits obtained towards consumer intentions to use e-grocery. The pleasure felt by consumers due to the benefits felt can trigger a positive attitude, then lead to the intention to use e-grocery (Poon & Tung, 2022). Consumer attitudes towards e-grocery will increase due to the influence of perceived ease of use on perceived usefulness (Kasuma et al., 2021). Indirectly, perceived usefulness also mediates the relationship between perceived ease of use and attitude and behavioral intention. A positive attitude toward e-grocery is felt and an increase in intention to use (behavioral intention) occurs as a result of the benefits felt by consumers (perceived usefulness) because of the ease of use of the application (perceived ease of use).

CONCLUSION

Based on the findings for factors influencing technology acceptance using the Technology Acceptance Model (TAM) framework, several conclusions can be outlined. First, Perceived Usefulness and Perceived Ease of Use can shape positive consumer attitudes towards grocery shopping through e-grocery applications. Time savings, effectiveness, and ease of use and learning of applications are some of the factors that influence consumers to form positive attitudes towards shopping through e-grocery applications. Second, Perceived Usefulness and Attitude can encourage consumer behavioral intentions to use e-grocery applications to shop for daily needs. E-grocery applications that offer time savings and positive consumer attitudes will shape consumer Behavioral Intention towards them. Consumers tend to use e-grocery applications because they can provide benefits to them. Third, Perceived Ease of Use does not have a direct impact on Behavioral Intention. The convenience felt by consumers will shape a positive attitude through the benefits that consumers will get. These benefits and positive attitudes felt by consumers will later influence consumer intentions to use e-grocery applications to shop for groceries.

This research is expected to be used as input for parties involved in the e-grocery world regarding consumer acceptance of e-grocery technology. E-grocery applications have many benefits and conveniences offered to consumers. The development of e-grocery in Indonesia in general and in Pekanbaru City in particular, will depend on public acceptance to switch to using e-grocery applications as one of the channels for shopping for daily needs. By knowing the factors that influence consumer Behavioral Intention, it can be a reference for developing an e- grocery business. For further research, the author suggests to further explore consumer Actual Behavior as a continuation of Behavioral Intention. In addition, the addition of other inhibiting factors such as the availability of stores that provide e-grocery services, product variations, product quality, trust or a combination with other consumer behavior theories need to be studied further, so that a comprehensive picture can be obtained regarding consumer behavior towards e-grocery applications for shopping for daily needs.

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