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Analyzing Online Food Shopping Behavior 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: *Technology Acceptance Model (TAM), E-grocery, Perceived Usefulness, Perceived Ease of Use, Attitude.*

INTRODUCTION

The development of smartphones has opened up many opportunities for sellers to develop their business. This phenomenon is especially visible in the e-commerce industry which has experienced a significant surge thanks to the advancement of smartphones. The development of the e-commerce business in Indonesia has indeed experienced a rapid increase, especially during the COVID-19 pandemic(Kurniasari & Riyadi, 2021). One sub-sector that is benefiting from this trend is e-grocery, where purchasing groceries online is becoming popular. Online grocery shopping has become an effective solution for meeting daily needs during the COVID-19 pandemic(Rout et al., 2022). However, after the COVID-19 pandemic ended, this positive trend of shopping via e-grocery did not continue. There are several factors that might influence this change, one of which is the aspect of technology acceptance by consumers. While there has been initial adoption of online food purchasing, there are new challenges emerging post-pandemic that are making consumers less enthusiastic or skeptical of this business model.

This is of course in sharp contrast to the benefits offered by e-grocery. E-grocery allows customers to fulfill their daily needs without having to sacrifice time to leave their routine activities. With the increasingly busy lifestyles that many consumers have today, shopping online should be a very attractive option(Poon & Tung, 2022). Additionally, e-grocery services have evolved according to consumer needs and preferences. Current service developers have paid great attention to user-friendly aspects, so that the online shopping process becomes easier and more efficient for users, without requiring high technical skills. This means that e-grocery not only offers convenience, but also greater accessibility for all groups, increasing its appeal as a practical shopping solution in everyday life.

In this research, to see the perceptions of e-grocery users in Pekanbaru City regarding technology, one of the widely used consumer behavior theories is used. The theory used is the Technology Acceptance Model (TAM). TAM is the behavioral model most widely used to explain the acceptance and use of new technology (Bauerová & Klepek, 2018;Kurniasari & Riyadi, 2021). TAM provides an overview that is used 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 not be chosen by users due to various factors, such as convenience, trust, and

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skill (Anesbury et al., 2016;Anitha & Krishnan, 2022). Through the TAM approach, it can be understood that the successful adoption of technology such as e-grocery does not only depend on the availability of the technology itself, but also on the user's perception of its usefulness and ease of use. Therefore, this research was conducted to understand the factors that influence consumer acceptance in Pekanbaru City of e-grocery after the pandemic, so that business strategies can be adjusted to overcome existing obstacles and improve their impact on overall e-grocery business development.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

Technology Acceptance Model(TAM) is a framework that explains the factors that influence how users receive and use technology. This model was first developed byDavis (1989)as a result of the expansion of the Theory of Reasoned Action proposed byFishbein & Ajzen (1975). User intentions in TAM are described through three main components, namely perceived ease of use, perceived usefulness and attitude (Bauerová & Klepek, 2018;Driediger & Bhatiasevi, 2019;Granić & Marangunić, 2019;Nguyen et al., 2019). As an evolution of the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM) also recognizes that attitude acts as a mediator between belief and intention. TAM has become an important foundation in understanding user behavior towards technology, helping researchers and practitioners to identify and address factors that influence technology adoption more effectively.

Behavioral Intention

Behavioral Intention in this research refers to the measure of the possibility that a person will carry out a certain behavior in the context of information technology(Bauerová & Klepek, 2018). If the behavior is considered good to do, the possibility of carrying out the behavior will be greater. A positive assessment of a behavior will increase the possibility of carrying out that behavior(Poon & Tung, 2022). This behavioral intention is closely related to the actual behavior that will be carried out. So, through assessing behavioral intention, it is possible to identify a person's possibility of carrying out an action(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 through applications is important to understand(Al Amin et al., 2022). In this research, the situational determinants assessed are the perceived benefits and convenience of e-grocery applications.

Perceived Usefulness (PU)

Perceived usefulness(PU) is the degree to which users believe that the use of a particular technology will improve their performance(Davis, 1989;Venkatesh & Davis, 2000). Perceived usefulness is said to be the main determinant of influence on behavioral intention. The acceptance and use of a new technology system by users can be known through their perception of the benefits they feel from the system (Venkatesh & Davis, 2000). Perceived usefulness can be felt by consumers in the form of increased experience and effectiveness in shopping in the context of online grocery shopping(Citizen & Hendijani, 2022). The perceived experience and benefits will influence consumers' attitudes as users of the system. Consumers who believe in benefits*e-grocery*will give a positive attitude towards him(Jasti & Syed, 2019). The influence that perceived usefulness (PU) has on attitudes (ATT) can be seen in many previous studies that confirm this influence (Bauerová & Klepek, 2018;Driediger & Bhatiasevi, 2019;Kurnia & Chien, 2003;Troise et al., 2021). Based on this explanation, the proposed hypothesis is as follows:

H1: Perceived usefulness (PU) has a positive and significant effect on attitudes (ATT) towards online grocery shopping in Pekanbaru City.

*Perceived usefulness*has a strong influence on consumer intentions to shop online (Davis, 1989;Ruangkanjanases et al., 2021). Consumers will first look at the benefits they feel compared to other factors in the context of shopping via e-grocery(Chakraborty, 2019). The relationship between these variables can be found in much of the literature (Chakraborty, 2019;Saleem et al., 2022;Sitorus & Vania, 2022), so that the hypothesis formulated is:

H2: Perceived usefulness (PU) has a positive and significant effect on behavioral intention (BI) when shopping for groceries online in Pekanbaru City.

Perceived Ease of Use (PEU)

Perceived ease of use(PEU) is the extent to which the user believes that the use of a particular technology will not cause difficulties(Davis, 1989). In simple terms, perceived ease of use refers to consumers' hope of ease in obtaining product information without having to spend a lot of effort and time(Saleem et al., 2022) . TAM states that perceived usefulness is influenced by perceived ease of use (Venkatesh & Davis, 2000;Citizen & Hendijani, 2022). An information technology system will be more useful if it is easy to use (Venkatesh & Davis, 2000). Perceived ease of useis the main 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;Citizen & Hendijani, 2022). The hypothesis proposed based on the explanation above is explained as follows:

H3: Perceived ease of use (PEU) has a positive and significant effect on perceived usefulness (PU) in online grocery shopping in Pekanbaru City.

A positive attitude will be felt by consumers when a technology is easy to use (Shukla & Sharma, 2018;Citizen & 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 carried out (Chakraborty, 2019;Saleem et al., 2022;Shukla & Sharma, 2018). So, the proposed hypothesis is as follows:

H4: Perceived ease of use (PEU) has a positive and significant effect on attitudes (ATT) towards online grocery shopping in Pekanbaru City.

Ease of use will strengthen consumers' intentions to use a 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, the hypothesis used to describe the relationship between PEU and BI is as follows:

H5: Perceived ease of use (PEU) has a positive and significant effect on behavioral intention (BI) when shopping for groceries online in Pekanbaru City.

Attitude (ATT)

Attitudeis a form of a person's self-perception regarding whether or not to carry out a certain behavior(Adiyoso & Wilopo, 2021;Tyrväinen & Karjaluoto, 2022). Attitude is a permanent tendency to carry out subsequent behavior(Qi et al., 2021). The experience that consumers gain greatly influences their intentions. Consumers' past experiences can produce varied intentions(Nawi et al., 2019). Attitudinal 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) has a positive and significant effect on behavioral intention (BI) when shopping for groceries online in Pekanbaru City.

METHOD

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

Table 1. Operational Definition of Variables

Variable	Definition	Indicator	Scale
Perceived Usefulness (X1)	Perceptions of functional benefits, such as perceived time savings, application usefulness, effectiveness, efficiency, and suitability of a technology to needs, are what is meant by perceived usefulness.	1. Time savings 2. Effectiveness 3. Efficiency 4. Application usefulness 5. Suitability (Bauerová & Klepek, 2018;Driediger & Bhatiasevi, 2019;Nguyen et al., 2019)	Likert
Perceived Ease of Use (X2)	Perception of ease of use refers to views about 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. Hassle 3. Ease of Learning (Bauerová & Klepek, 2018;Driediger & Bhatiasevi, 2019;Nguyen et al., 2019)	Likert
Attitude (X3)	Attitudes in this study reflect beliefs about the perceived benefits, the individual's evaluation of the wisdom of the behavior, as well as feelings or emotions such as satisfaction and the individual's belief in the results or consequences that may occur when using the grocery store application.*on line*.	1. Belief in Benefits 2. Wisdom 3. Pleasure 4. Confidence in Results (Bauerová & 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, clarity of intention which shows how much the individual is willing to actually carry out the behavior, and planned intention which is reflected in usage habits.	1. Strong desire 2. Action Tendencies 3. Clarity of Intent 4. Routine (Bauerová & Klepek, 2018;Driediger & Bhatiasevi, 2019;Nguyen et al., 2019)	Likert

Source: *Processed Data, 2024*

Descriptive analysis was carried out in this research. Descriptive analysis is used to understand the position of a variable without making comparisons or investigating the correlation between that 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, the aim of this descriptive research is to provide a comprehensive picture of aspects that are relevant to the phenomenon being observed. The results of the descriptive analysis are then used to assess aspects that need improvement, or even improvement, especially if the condition is good.

The Structural Equation Modeling-Partial Least Squares (SEM-PLS) analysis carried out in this research consisted of testing the outer model and testing the structural model (inner model). The outer model testing in this research was tested using validity and reliability tests. The validity test consists of convergent validity (loading factor, average variance extracted) and discriminant validity (fornell-larcker criterion, cross loading, heterotrait-monotrait ratio (HTMT)). The threshold value required for the convergent validity test is 0.7 for loading factor and 0.5 average variance extracted(Hair et al., 2017).

In discriminant validity testing, for the Fornell-Larcker criterion test, the square root value of AVE in the Fornell-Larcker criterion test must be greater than the correlation with other latent variables. The outer loading value of an indicator on a variable in a cross loading test must be greater than the cross loading on another variable(Hair et al., 2017). For the heterotrait-monotrait ratio (HTMT), the value must be below 0.85(Hair et al., 2017). Meanwhile, the reliability test was carried out by assessing 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 greater than 0.7 andThe 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 the R-square, f-square and Predictive Relevance ($Q^2 > 0$) tests.

Figure 1. Research Model

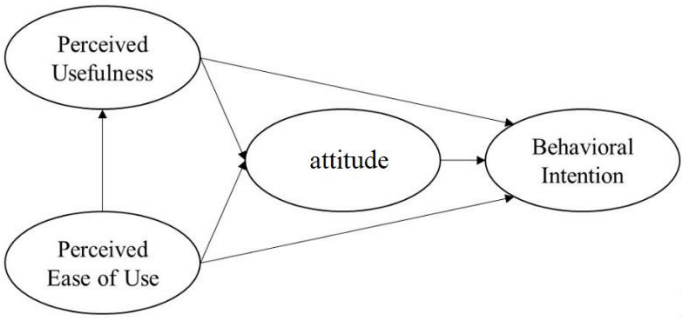

Figure 1. Research Model
Source: Bauerová & Klepek (2018)

RESULTS AND DISCUSSION

Research Result

The sample obtained for this research was 174 women who had shopped via e-grocery. The sample of women used in this study is 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 old	69	33%
	25 – 34 years old	89	43%
	35 – 44 years old	37	18%
	45 – 55 years old	11	5%
	Over 55 years old	2	1%
	Total	208	100%
Education	SENIOR HIGH SCHOOL	24	12%
	Diploma	17	8%
	Bachelor	119	57%
	Masters/Doctoral	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%
Have use	Yes	174	84%
	No	34	16%
	Total	208	100%

Source: Processed Data, 2024

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

Table 3. Descriptive Analysis of Variables

VARIABLES	MEANS	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 respondents' answers obtained was 3.38. Respondents' behavioral intention was found to be still low if seen

from descriptive analysis. Meanwhile, 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 were aged between 18-24 years (33%) and 25-34 years (43%). The respondents' relatively young age influences their ability to use e-grocery applications. In addition, the educational level of most respondents was 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 found that all indicators had a value above 0.7. The indicators in this research 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 a valid variable for use in this research.

Table 4. Loading Factor Value

	BI	ATT	PEU	PU	Information
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

Variable	AVE	Information
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 to use. The Heterotrait-Monotrait Ratio (HTMT) value, which can be seen in the matrix below, shows a good value. HTMT values below 0.85 indicate that the variables measure different phenomena(Henseler et al., 2015).

Table 6. Fornell-Larcker Criterion values

	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 shows that the value is above the required threshold, namely 0.7. The construct can be said to be reliable for use in research(Hair et al., 2017).

Table 8. Reliability Test

Variable	*Composite Reliability*	*Cronbach's Alpha*	Information
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 testing the inner model in the form of R-Square showed that the variable perceived usefulness (PU) was influenced by perceived ease of use (PEU) by 40.4%, attitude (ATT) was influenced by the variables perceived usefulness (PU) and perceived ease of use (PEU) by 59.9%. % and behavioral intention (BI) are 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 perceived ease of use (PEU) variable on the perceived usefulness (PU) variable has a high value, namely 0.679. The effect given to attitude (ATT) by the moderate perceived ease of use (PEU) is 0.160 and the high perceived usefulness (PU) variable is 0.407. The magnitude of this effect causes the R-Square value of the Attitude variable (ATT) to be the highest. Meanwhile, the effect given by the variables perceived usefulness (PU), perceived ease of use (PEU) and attitude (ATT) on behavioral intention (BI) has a smaller value.

Table 9. R-Square Value

Variable	*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

Proposing a hypothesis was carried out using the bootstrapping method for 5,000 samples. Based on the test results, it was found that there was a significant relationship between the variables PU 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 test

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

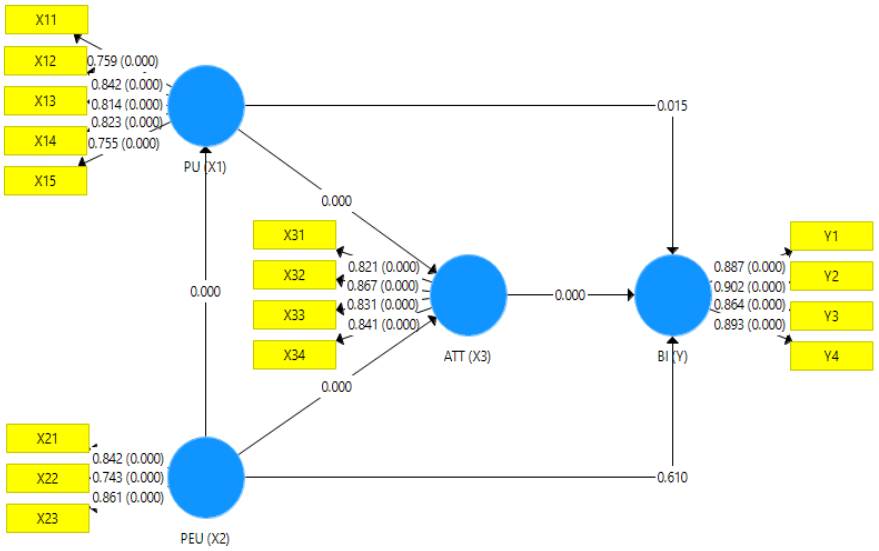

Figure 2. Structural Equation Modeling-Partial Least Squares (SEM-PLS) Analysis Results
Source: Processed Data, 2024

Testing the mediation effect found the ability of the variables perceived usefulness (PU) and attitude (ATT) to mediate 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) mediates the relationship between PEU and BI in full mediation and the relationship between PEU and ATT in partial mediation.

Table 12. Mediation Effects

Connection	*P Values*	*Indirect Effects*	Connection	*P Values*	*Direct Effects*	*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 obtained in relation to the direct effect between PEU and BI was found to be insignificant. The PEU variable influences BI indirectly through the ATT and PU variables. If we look at the total effect given, we can see a significant increase in the total effect of the PEU variable on BI, namely 0.473.

Table 13. Total Securities Coefficient Value

Variable	***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 turns out to be significant as a result of indirect relationships with other variables. PEU influences BI indirectly through PU, ATT and a combination of PU

and ATT. Meanwhile, the relationship between PEU and ATT has 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→ATT	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

DISCUSSION

This research shows that the Technology Acceptance Model theory can be used in the context of online grocery shopping via 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 regarding these relationships can be found. Perceived usefulness was found to have an influence on attitudes in this research. Based on the results of research by Arslan & Turan (2022) It is stated that consumers who find the e-grocey application useful will definitely develop a good attitude towards it. The time-saving aspect offered by e-grocery applications can be a benefit that consumers experience when purchasing groceries. The same results on the influence of perceived usefulness on attitudes were found in other research (Anitha & Krishnan, 2022;Nguyen et al., 2019;Shukla & Sharma, 2018).

Perceived usefulness has a greater influence on attitudes than perceived ease of use (Citizen& Hendijani, 2022). Although other studies found different results, namely perceived ease of use which had a greater influence (Loketkrawee & Bhatiasevi, 2018;Nguyen et al., 2019). Consumers who are familiar with 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 for consumers to use and learn. Even though there are differences in the magnitude of the influence, these two determinants still show the consistency of the TAM model for testing consumer usage intentions.(Loketkrawee & Bhatiasevi, 2018).

Apart from influencing attitudes, perceived usefulness also has a direct impact on behavioral intention. Perceived usefulness influences consumer behavioral intention in this research. These results support the results of research that has been conducted previously (Kurnia & Chien, 2003;Ruangkanjanases et al., 2021;Citizen & Hendijani, 2022). The benefits obtained by consumers such as saving time, ease of shopping and minimal effort expended make consumers' intention to use e-grocery applications increase.(Sitorus & Vania, 2022). Different results were found in research byNguyen et al. (2019), who found that PU influences BI only through attitudes. In this research, it was found that PU had a direct influence on BI and also through attitudes as mediators. This shows that Perceived usefulness can also influence behavioral intention through positive attitudes 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 determining factor of behavioral intention from the TAM model is perceived ease of use. Apart from influencing attitudes and behavioral intentions, 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 research. The ease of using and learning 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;Citizen & Hendijani, 2022). E-grocery applications that are easy to use and learn will save time and minimize the effort that consumers have to spend. So this is seen as a benefit by consumers, which will then increase their intention to apply e-grocery in consumers' daily lives.

Apart from having an impact on perceived usefulness, the convenience that consumers find in e-grocery applications will influence consumer attitudes towards e-grocery applications. The influence of perceived ease of use on attitudes can be explained in this research. Positive assessments regarding online grocery shopping will be formed when consumers find it easy to use (Citizen & Hendijani, 2022). These findings are 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 expended by consumers will foster a positive attitude towards e-grocery applications. However, the influence of perceived ease of use on attitude variables was not found in research by Troise et al. (2021). In this research, consumer perceptions of perceived convenience were influenced by other variables (Troise et al., 2021).

The influence of perceived ease of use on behavioral intention was not found in this research. The same results as in this study can also be seen in other studies (Bauerová & Klepek, 2018;Jasti & Syed, 2019;Ryadi et al., 2021). Perceived ease of use will have an influence on behavioral intention through perceived usefulness (Bauerová & Klepek, 2018;Jasti & Syed, 2019;Shukla & Sharma, 2018) and attitude (Kurnia & Chien, 2003;Nguyen et al., 2019;Saleem et al., 2022). In research byBauerová & Klepek (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 research which shows the significant role of perceived ease of use on behavioral intention. Convenience can still influence consumers' intentions to use e-grocery applications. Consumers' positive attitudes and the benefits consumers feel about e-grocery applications will still influence their intention to use them. Even though it still takes a strong desire to switch to online platforms, consumers still show positive intentions to use e-grocery applications.

The influence of attitude on behavioral intention was obtained in this research. 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 research (Saleem et al., 2022). Attitude can be a facilitator of the benefits obtained in consumers' intentions to use e-grocery. The feeling of pleasure that consumers feel due to the perceived benefits can trigger a positive attitude, which then leads to the intention to use (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 towards 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 that influence technology acceptance using the Technology Acceptance Model (TAM) framework, several conclusions can be outlined. First,*Perceived Usefulness*and Perceived Ease of Use can form consumers' positive attitudes towards shopping for groceries through e-grocery applications. Time savings, effectiveness and ease of use and learning of applications are several factors that influence consumers so that they form a positive attitude towards shopping through e-grocery applications. Second, Perceived Usefulness and Attitude are able to encourage consumers' behavioral intentions to use e-grocery applications to shop for daily necessities. 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 form a positive attitude through the benefits that consumers will get. The benefits and positive attitudes felt by consumers will later influence consumers' intentions to use e-grocery applications to shop for groceries.

It is hoped that this research can be used as input for parties involved in the world of e-grocery regarding consumer acceptance of e-grocery technology. E-grocery applications have many benefits and conveniences to offer consumers. The development of e-grocery in Indonesia in general and in Pekanbaru City in particular, will depend on public acceptance of switching to using e-grocery applications as a channel for shopping for daily needs. By knowing the factors that influence consumer Behavioral Intention, it can be used as a reference

for e-grocery business development. For further research, the author suggests studying consumer Actual Behavior as a continuation of Behavioral Intention. Apart from that, the addition of other factors that become obstacles such as the availability of shops that provide e-grocery services, product variety, product quality, trust or combining with other consumer behavior theories needs to be researched further, so that a comprehensive picture of consumer behavior towards e-grocery application for shopping for daily necessities.

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