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FACTORS INFLUENCING THE FARMERS' BEHAVIORAL INTENTIONS OF FARMER CARDS IN SUMENEP REGENCY

Laras Nur Fitriani, Darsono, Umi Barokah
Program Studi Magister Agribisnis Fakultas Pertanian Universitas Sebelas Maret
Jln Ir. Sutami No. 36, Kentingan, Kec. Jebres, Kota Surakarta, Jawa Tengah 57126
email: larasnurfitriani684@student.uns.ac.id

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ABSTRACT

Many factors cause the issue of fertilizer subsidies. One of them is about the implemented system has not been running optimally. The Farmer Card is an innovation to obtain subsidized fertilizers. The innovation has many obstacles, including the lack of awareness and knowledge of farmers' human resources (HR) in understanding the innovations' usefulness. The study's objective was to determine the factors influencing the acceptance of the Farmer Card based on the Technology Readiness and Acceptance Model (TRAM). Primary data were gained from the farmers by taking a simple random sampling method using the Hair formula for as many as 115 farmers using Farmer Card in Kabupaten Sumenep. The data were analyzed using the quantitative descriptive method through the Partial Least Square (PLS) technique. The study's objective was to determine the effect of optimism, innovativeness, discomfort, insecurity, perceived usefulness, and perceived ease of use on behavioral intention to use in technology readiness with a p-value of 0.000 (<0.05). The test results show that the variables of optimism (H1 and H2), discomfort (H5), perceived usefulness (H9), and perceived ease of use (H10) have a significant effect on behavioral intention to use Farmer Card. Testing the effect of innovativeness (H3 and H4), discomfort (H6), and insecurity (H7 and H8) showed a p-value of 0.091; 0.259; 0.127; 0.853; 0.385 (> 0.05) means that it has no significance. For the Farmer Card program to be successful, it is recommended to enhance cooperation further and shared views among the farmers and stakeholders.

Keywords: Farmer Card, Readiness, Subsidized Fertilizer

INTRODUCTION

The world of agriculture has entered the era of the industrial revolution 4.0, which has the opportunity to develop in meeting the needs of farmers, especially in subsidized fertilizers (Ahmad & Wibowo, 2021). A policy is like a double-edged sword, the first side has a positive impact which means it will provide support in improving the national economy and welfare for farmers, but the other side harms state financing (Susilowati, 2016). The government launched the subsidized fertilizer policy to fulfill the six principles in its implementation. The six principles are the right amount, the right type, the right time, the right place, the right quality, and the right price. The use of subsidized fertilizers is often misused even though farmers who should get subsidized fertilizers are under the six principles, especially farmers in the food sub-sector (Suryana et al., 2016).

The Farmer Card is a banking service program from the government that is integrated and functions as a transaction, savings, lending, and fertilizer subsidy card or e-wallet. The card is a debit card used specifically by farmers in making allocations, distributions, and payment transactions for subsidized fertilizers. The farmer card's purpose is to secure fertilizer subsidy distribution. The use of the Farmer Card will make it easier for the government to every program intervention for farmers in improving agricultural programs that run according to targets (Pertanian, 2017). Since the national Farmer Card launch in 2016, the Farmer Card program has not shown the implementation of good results as expected (Ashari & Hariani, 2019). The latest technological innovations in the form of Farmer Card, namely the subsidized fertilizer redemption system, from initially using cash payments or directly to payment with Farmer Card in the form of ATM cards (automated teller machines). Shows changes in farmers' readiness and acceptance, namely, lack of awareness and low knowledge of farmers in understanding the usefulness of the service features provided. This can affect the planning of the allocation of subsidized fertilizer needs that are not yet appropriate, and the supervision carried out is not optimal. The disparity in prices of subsidized and non-subsidized fertilizers can also cause fertilizer distribution to be inappropriate (Susila, 2010). Farmers can assist farmers in distributing subsidized fertilizers. Farmer cards provide services or facilities in subsidized fertilizers, so farmers' readiness and acceptance of interest in using farmer cards appear.

Farmers' readiness is part of the measurement for the adoption of the new technology of the Farmer Card. Several methods are used for Technology Readiness Index (TRI) and Technology Acceptance Model (TAM). The TRI method proposed by (Colby & Parasuraman, 2001) defines technology readiness (TR) as an index to measure user readiness for new technology. While the Technology Acceptance Model (TAM) proposed by (Hwang & Yi, 2002) states that the use of the system can be influenced by behavioral interests that are influenced by user perceptions, namely perceptions of perceived usefulness and perceived ease of use. Previous research that discusses Farmer Card information technology, for example, research (Meliyanawati et al., 2020) on the attitudes and motivations of farmers who own Farmer Card in adopting Farmer Card, namely the attitude and

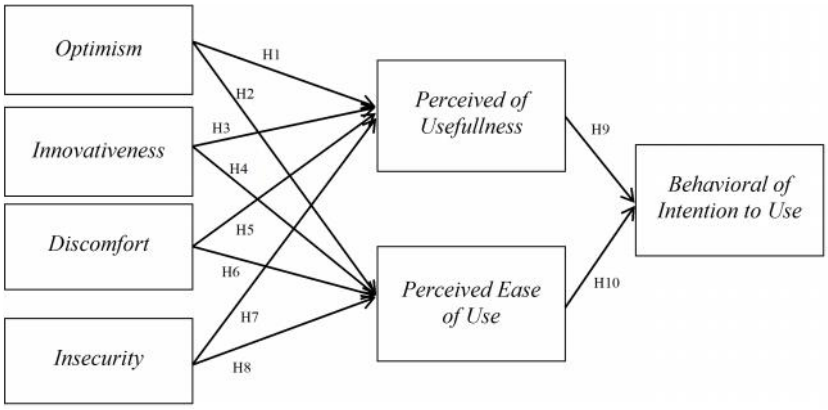
motivation variables have a real influence on the adoption variable; in a study (Yuliana & Nadapdap, 2020) about the factors that influence farmers in adopting farmer cards, namely the variable characteristics of innovation; and research from (Fahmi & Maria, 2020) about farmers' perceptions of the existence of a farmer card, namely the characteristics of farmers' age and farming experience leading to a negative direction because most of them are over 50 years old and have experience managing a farming business by direct payment. Previous research discusses the factors of readiness and acceptance that affect the interest of technology users in research (Pasaribu, 2020). The effect of readiness factors that are declared accepted is the optimistic factor on the perception of usefulness and the innovative factor on the perception of convenience. At the same time, the acceptance factor of perceived usefulness and perceived convenience positively and significantly affects an interest in using technology. In another study by (Martens et al., 2017), all factors of readiness from the TRI model affect acceptance of use except for the optimistic factor on the perception of convenience and the discomfort factor on the perception of usefulness.

Based on this description, research on "Factors Affecting Farmers' Interest in Using Farmer Card in Sumenep Regency" is important to do because it will help make it easier for the government to intervene in the farmer program to increase agricultural production with the hope that programs in the agricultural sector can run according to targets. The purpose of the study was to analyze the factors that influence the interest in using farmer cards based on the Technology Readiness and Acceptance Model (TRAM).

METHODS

Framework

In this study, the TRI model significantly influences Perceived Ease of Use, and Perceived Usefulness significantly influences Behavioral Intention to Use (Hsu & Lu, 2007). So the following research will jointly influence Behavioral Intention to Use. Based on the background of the research above, a conceptual model is designed, as shown in Figure 1.



Source: Rosmayanti, Aryadita, & Herlambang, 2018

Figure 1 Conceptual Model

Scope of Discussion

The scope of this research is: 1) Farmer card is a program from the Government for farmers in facilitating the distribution of fertilizer subsidies, within the scope of activities of implementing farmer cards by farmer card owners and related parties such as the Sumenep Regency agriculture office, fertilizer distributor/ retailer kiosks, card issuing bank (Bank BNI) and farmer groups in Sumenep Regency; 2) The use of farmer cards, namely involving farmers as farmers card users in the readiness and acceptance of new information technology; 3) Farmers who have used farmer cards and received subsidized fertilizers.

Research Location and Time

Sumenep Regency is the only district in East Java that has become a pilot project for the farmer card, and according to Central BNI at the farmer card workshop on February 17, 2021, Sumenep Regency has made farmer card transactions with the highest fertilizer value in East Java, which amounted to IDR 51,227,454,500 in the year 2020-2021. Sumenep Regency has used farmer cards for transactions of 30,934 cards. The amount of fertilizer distributed is 29,244,005 kg, with a total fertilizer value of IDR 51,227,454,500. Therefore, farmers in Sumenep Regency are the right object to be studied. The time of study was carried out from September to October 2021.

Types and Methods of Data Collection

The type of data used is primary data from the first source in this study, farmers who use farmer cards. Primary data through interviews and field observations with the help of structured questionnaires to farmers who have received farmer cards and through Focus Group Discussions (FGD) with related parties. The data needed is in the form of readiness and acceptance of farmers for the interest in using farmer cards. The population of this research is all farmers who use farmer cards in Sumenep Regency. Total population 102,760 farmers. Sampling using the simple random sampling method with the technique of determining the number of samples of farmers using the formula (Hair Joe F. et al., 2016) with a ratio of 5:1. In this study, there are 23 question items, so the sample size needed is 115 farmers who use farmer cards. In addition, representatives from the agriculture office and fertilizer distributor/retailer kiosks are needed to strengthen information on fertilizer distributors.

Data analysis

The readiness variables used in this study are optimism, innovativeness, and discomfort (Colby & Parasuraman, 2001). Acceptance variables are perceived usefulness, perceived ease of use, and behavioral intention to use (Mun & Hwang, 2003). (Dawes, 2008) The questionnaire follows the Likert scale to test the instrument's feasibility using validity and reliability tests. The data collected was analyzed descriptively, qualitatively, and quantitatively, which was then analyzed by Structural Equation Modeling (SEM) analysis with the type of technique used in this study was partial least squares path modeling (SEM-PLS) on SmartPLS 3 software (Hair Jr et al., 2016).

RESULTS AND DISCUSSION

Farmer Profile of Farmer Card Users

Farmers using farmer cards in Sumenep Regency show farmer profiles based on

gender, age, education level, length of experience in farming, arable land area, and income. The profiles of farmers using farmer cards are described in Table 1.

Table 1 shows that the role of male farmers is more, namely 60 farmers or 52.5 percent. The role of men can not be separated from the responsibility of the head of the family in providing for his family. In line with research (Chakim, 2019), the role of female farmers is less at 15.9 percent than male farmers at 84.1 percent.

The age of farmers is dominated by the age category > 50 years or 50.4 percent, as illustrated in Table 1, which shows that the older the farmer, the more mature the ability and work spirit of the farmer. (Hutapea et al., 2012) Said that the productive age is between 15-55 years at the age of relatively younger farmers will be quick and easy to apply technology compared to older farmers. (Pramuditya & Prihtanti, 2019) The average male farmer is productive and has been in agriculture for a long time.

Table 1 Farmer Profile of Farmer Card Users

No.	Respodents	Frequency (People)	Composition (%)
	Gender		
1	Male	60	52.5
2	Female	55	47.8
	Total	115	100
	Age		
1	< 20 years	0	0
2	20 – 30 years	1	9
3	31 – 40 years	20	17.4
4	41 – 50 years	36	31.3
5	>50 years	58	50.4
	Total	115	100
	Education Level		
1	Elementary School	38	33
2	Junior High School	46	40
3	High School	26	22.6
4	Diploma and Bachelor	5	4.3
	Total	115	100
	Long Experience in Farming		
1	< 5 years	6	5.2
2	5 – 10 years	26	22.6
3	11 – 20 years	29	25.2
4	>20 years	54	47
	Total	115	100
	Cultivated Land Area		
1	< 0,5 ha	50	43.5
2	0,5 – 1 ha	42	36.5
3	1,1 – 2 ha	21	18.3
4	>2 ha	2	1.7
	Total	115	100
	Income		
1	< 10 million/ harvest	100	87
2	10 – 20 million/ harvest	14	12.2
3	21 – 30 million/ harvest	1	0.9
4	>30 million/ harvest	115	100
	Total		

Source: Primary Data Processed, 2021

At the level of farmers' education, the use of farmer cards in Sumenep Regency is dominated by junior high school graduates, 46 farmers or 40 percent. Under these conditions, the farmer card program needs an approach to be accepted and applied by farmers. This is in line with research (Pramuditya & Prihtanti, 2019) (Impiani et al., 2020) that most farmers in the study area have a low level of education. (Hutapea et al., 2012) The higher farmers' education level, the more rational decisions will be taken.

Experience is an important factor in the success of a business. The length of experience in farming farmers in Sumenep Regency is > 20 years by 54 farmers or 47 percent. This is in line with the average age of farmers above 50 years. Most farmers still carry out their farming in a conventional way, mainly from the fertilization mechanism. The dose used is based on the habits of senior farmers and does not adjust the nutrients in the soil.

One of the requirements to get subsidized fertilizer is to have a maximum land area of two hectares. Table 1 explains that two farmers with a land area of more than two hectares should not receive subsidized fertilizers. The realization of the distribution of subsidized fertilizers according to the requirements met 98.57 percent. This needs attention from stakeholders in adjusting the needs of the type of fertilizer according to the dose so that increased crop yields can be produced.

Farmer income from Table 1 shows <10 million per harvest. More than 50 percent who earn below 10 million, to be exact, are 100 farmers or 87 percent. According to (Chakim, 2019), the average harvest income is below 10 million per harvest, so the farmer card program requires special steps so that farmers with relatively small incomes can manage finances by paying attention to the purchase of subsidized fertilizers.

Evaluation of Measurement Variables

The following is an explanation of the variables in the existing research on the theory and research results.

1. Optimism (Optimism / OP)

The optimistic attitude that exists in farmers using farmer cards in Sumenep Regency view that farmer cards provide a positive view, namely the ease of obtaining subsidized fertilizers because, without farmer cards, they will have difficulty getting subsidized fertilizer allotments because at agricultural kiosks already use a payment system with an Electronic Data Capture machine (EDC) (Walczuch et al., 2007). Farmers who are optimistic rate strongly agree that the farmer card is much more efficient because it is considered simpler by not carrying cash in cash. So farmers who are optimistic about having a farmer card view in the future will facilitate their farming by obtaining subsidized fertilizers.

2. Innovative (Innovativeness/ INN)

The attitude of innovation or innovation felt by farmers using farmer cards in Sumenep Regency is towards the tendency or habit of being a pioneer among other farmers. In the research results in the field, farmers who feel they are pioneers are the head of the farmer group because they feel responsible for the members of their farmer group so that when there is a socialization event, it will be attended by representatives, in this case, the role of the farmer group leader who becomes the representative and will share the information obtained with the group members.

3. Discomfort (DIS)

Farmers who have an uncomfortable attitude feel that obtaining a farmer's card is difficult. Because they must prepare the required documents such as E-KTP, not all farmers have replaced the old KTP with E-KTP. So they have to take care and take their time. Constraints after obtaining a farmer's card were felt to be unfinished. Farmers still need time to experience farmer card services, especially in transactions to top up balances at the bank to obtain subsidized fertilizer allotments from agricultural kiosks. Farmers feel that the field extension workers/ PPL are less helpful in implementing the farmer card. So farmers who behave in discomfort conclude that the farmer card will harm the perceived ease and benefits of using the farmer card.

4. Insecurity (INS)

Farmers who have an attitude of insecurity towards farmer cards will think negatively. Farmers feel that the farmer card will harm farmers because the procedure to obtain subsidized fertilizer is a long process. Farmers feel that cards shaped like ATMs (Automated Teller Machines) cannot be checked anytime because the distance from their residence to the BNI branch office is quite far. The security of the money in the balance is also considered unsafe because bank admin fees will deduct it. Farmers who have an attitude of insecurity conclude that the farmer card will harm the perceived ease and benefits of using the farmer card.

5. Perceived Usefulness (POU)

Farmers who use the farmer card in Sumenep Regency who perceive that the farmer card provides usefulness or benefits feel that the farmer card will increase the effectiveness of their farming. It can be concluded that the usefulness or benefits felt by farmers using farmer cards in using farmer cards will affect farmers' interest in using them.

6. Perceived Ease of Use (PEOU)

The perception of convenience felt by farmers who use the farmer card in Sumenep Regency will feel confident in using the farmer card. For farmers, farmer cards, which are used for transactions to obtain subsidized fertilizer allotments, will be easy because the system is clear and well-organized (Godoe & Johansen, 2012). Using a simpler technology system by swiping the farmer's card on the EDC machine is easy to do and accelerates performance in obtaining subsidized fertilizer. It can be concluded that the perceived ease of using the farmer's card can affect the perceived benefits and affect the desire to use the system.

7. Behavioral Intention To Use (BITU)

As for the tendency of users to use technology, the previous explanation says that the user's desire or interest to use the system can be influenced by two factors, namely perceived usefulness and perceived ease of use. So that farmers who use the farmer card in Sumenep Regency who perceive the usefulness and ease of using the card will be interested in using the technology and hope that the farmer card can continue for the long term.

Table 2 tests the validity using convergent validity and discriminant validity. Convergent validity variables are considered to meet if they have a minimum loading factor of 0.6 and ideally 0.7 or more and the Average Variance Extracted (AVE) value is > 0.5 (Ghozali, 2014). Table 2 summarizes the results of the measurement variables, the

Table 2 Convergent Validity and Discriminant Validity

Variable	Indicator	Loading Factor	AVE
Optimism (OP)	OP1	0,833	0,774
	OP2	0,894	
	OP3	0,918	
	OP4	0,873	
Innovativeness (INN)	INN1	0,919	0,823
	INN2	0,910	
	INN3	0,893	
Discomfort (DIS)	DIS1	0,910	0,832
	DIS2	0,914	
Insecurity (INS)	INS1	0,898	0,754
	INS2	0,782	
	INS3	0,918	
Perceived of Usefulness (POU)	POU1	0,896	0,816
	POU2	0,883	
	POU3	0,932	
	POU4	0,902	
Perceived Ease of Use (PEOU)	PEOU1	0,892	0,794
	PEOU2	0,894	
	PEOU3	0,900	
	PEOU4	0,878	
Behavioral Intention to Use (BITU)	BITU1	0,947	0,902
	BITU2	0,949	
	BITU3	0,953	

Source: Primary Data Processed, 2021

Information:
OP = Optimism
INN = Innovativeness
DIS = Discomfort
INS = Insecurity
POU = Perceived of Usefulness
PEOU = Perceived Ease of Use
BITU = Behavioral Intention to Use

results of the loading factor, and AVE values from each indicator of optimism, innovativeness, discomfort, insecurity, perceived usefulness, perceived ease of use, and behavioral intention to use, showing that all variables exceed the threshold value (0.7 and 0.5). The loading factor value of 0.782 to 0.953 and the AVE value of 0.754 to 0.902 means that it is valid and can be used for further analysis. This is in line with research (Chiu & Cho, 2020) that the AVE value is 0.592 to 0.929, which is above the threshold value and is said to be valid.

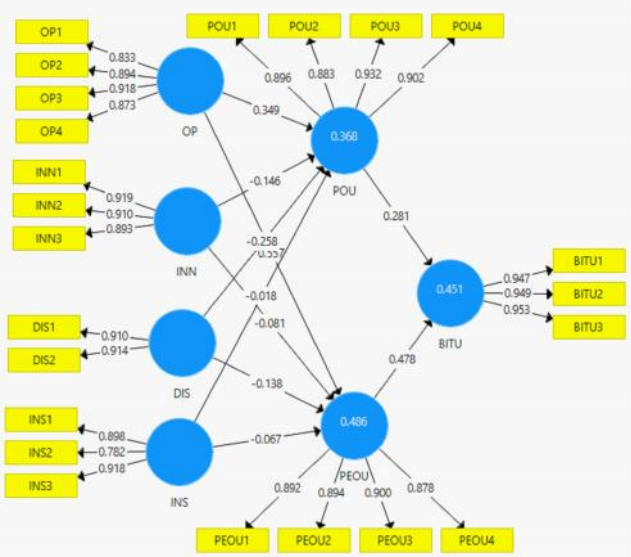
Table 3, discriminant validity is considered to meet if the AVE root value has a correlation value greater than the correlation between variables (Ghozali, 2014).

The reliability test in Table 4 from the results of the composite reliability of the relationship between variables with a measurement of 0.6-0.7 is still acceptable, and the results of Cronbach's alpha are> 0.7. From the test results, it can be seen that the variables of optimism, innovativeness, discomfort, insecurity, perceived usefulness, perceived

Table 3 Discriminant Validity (Fornell-Lacker's)

	Variable	1	2	3	4	5	6	7
1	BITU	0,950						
2	DIS	0,547	0,912					
3	INN	0,241	0,282	0,907				
4	INS	0,249	0,347	0,143	0,868			
5	OP	0,628	0,559	0,292	0,263	0,880		
6	PEOU	0,629	0,495	0,292	0,273	0,675	0,891	
7	POU	0,538	0,500	0,323	0,220	0,540	0,537	0,903

Source: Primary Data Processed, 2021



Source: Primary Data Processed, 2021

Figure 2 Path Diagram

ease of use, and behavioral intention to use have met composite reliability so that these variables produce reliable and consistent measurement values resulting in the path diagram in Fig 2.

The test of the feasibility of the indicators using the loading factor, AVE (Average Variance Extracted), composite reliability, and Cronbach's alpha are within the expected range of values. These results indicate that the variables used are acceptable. So the feasibility test of the SEM model indicators in this study has met the acceptance requirements and can be used for further analysis.

Structural Variable Evaluation

In Table 5, endogenous behavioral intention to use variables, perceived ease of use, and perceived usefulness together produce a moderate R-Square value of around 0.333 (Henseler et al., 2015). The two variables, perceived ease of use and usefulness, positively affect farmers' interest in using farmer cards. This is in line with research (Chiu & Cho, 2020) which has a moderate R-Square value. Thus, it can be concluded that farmers are more likely to use a farmer card when it is considered appropriate for perceived usefulness at the level of usefulness for a person and perceived

Table 4 Test Results of Composite Reliability and Cronbah's Alpha

Variable	Composite Reliability	Cronbach's Alpha	Description
Optimism	0,932	0,902	Reliable
Innovativeness	0,933	0,892	Reliable
Discomfort	0,908	0,798	Reliable
Insecurity	0,901	0,843	Reliable
Perceived of Usefulness	0,947	0,925	Reliable
Perceived Ease of Use	0,939	0,914	Reliable
Behavioral Intention to Use	0,965	0,946	Reliable

Source: Primary Data Processed, 2021

Table 5 Test Results of Coefficient of Determination (R-Square)

Variable Endogenous	R-Square	Description
Behavioral Intention to Use	0,451	Moderate
Perceived Ease of Use	0,486	Moderate
Perceived of Usefulness	0,368	Moderate

Source: Primary Data Processed, 2021

ease of use for a person's perceived ease of use of technology. The purpose of this study was to test the interest in using the farmer's card by applying the TRAM (Technology Readiness Acceptance Model) from the combination (Technology Readiness Index) TRI and (Technology Acceptance Model) TAM. The analysis provides a precise explanation of the hypothesis that is not supported and can explain the causes of the hypothesis. The following explains the results of the TRAM model testing in this study.

1. The Effect of Optimism on Perceived Usefulness and Perceived Ease of Use

The results of the structural variables show support for the first and second hypotheses. Namely, optimism positively or significantly affects perceptions of usefulness and ease of use. Shown by p-values of 0.004 and 0.000. This study is in line with (Shin & Lee, 2014), which found that optimism positively affected perceptions of ease of use and usefulness. This finding indicates that the high optimism of the farmer card farmer will increase the perception of ease in using the farmer card and in assessing the benefits of using the farmer card, so the potential for adopting the farmer card is predicted to be quite high.

2. The Influence of Innovation on Perceived Usefulness and Perceived Ease of Use

The results of the structural variable test show no support for the third and fourth hypotheses that innovation harms perceptions of usefulness and ease of use. The p-value of 0.091 and 0.259 indicates this. This study is not in line with (Shin & Lee, 2014), which found that innovative attitudes affect perceived usefulness and ease of use. This finding indicates that farmers are less aware of their innovative attitude towards the progress of using farmer cards. If this is not anticipated immediately, innovative attitudes have the potential to reduce perceptions of usefulness and convenience in the farmer's card system.

3. The Effect of Discomfort on Perceived Usefulness and Perceived Ease of Use

The results of the structural variable test show support for the fifth hypothesis but not the sixth hypothesis, namely that discomfort only affects the perception of convenience and does not affect the perception of usefulness.

Table 6 Analysis Results of *Bootstrapping*

Code	Variable	→	Variable	t-*statistik*	p-*values*	Description
H1	OP	→	POU	2,877	0,004	Significant
H2	OP	→	PEOU	5,044	0,000	Significant
H3	INN	→	POU	1,691	0,091	Unsignificant
H4	INN	→	PEOU	1,129	0,259	Unsignificant
H5	DIS	→	POU	2,366	0,018	Significant
H6	DIS	→	PEOU	1,528	0,127	Unsignificant
H7	INS	→	POU	0,185	0,853	Unsignificant
H8	INS	→	PEOU	0,870	0,385	Unsignificant
H9	POU	→	BITU	2,816	0,005	Significant
H10	PEOU	→	BITU	4,322	0,000	Significant

Source: Primary Data Processed, 2021

This indicates that the perceived usefulness of use is influenced by the attitude of the farmer's comfort. The usefulness of the technology service usually measures the convenience of the farmer card farmer. Although this is not supported by the perception of the convenience of the farmer card service, it shows that convenience is not a measure of a positive perception of the farmer card because the use of the farmer card for transaction purposes is more emphasized on the functional aspect, not for the convenience of individual use.

4. Effect of Insecurity on Perceived Usefulness and Perceived Ease of Use

The results of this test indicate that there is no support for hypotheses seven and eight, namely that insecurity does not affect perceptions of usefulness and ease of use. From the results of observations and interviews with farmer card farmers in Sumenep Regency, a farmer card's usefulness is not measured by whether or not a technology is safe. However, it is assessed based on the farmer card's contribution. Therefore, it is unsurprising that some farmers still use the conventional payment transaction system (direct cash payments). For this reason, it is important to build the level of the farmer's trust in the farmer card regarding the safety and benefits it produces.

5. The Influence of Perceived Usefulness and Perceived Ease of Use on Interest in Using Farmer Card

The test results support the ninth and tenth hypotheses, namely that perceptions of usefulness and convenience positively affect interest in use. This research provides important information for stakeholders that the decision to adopt a farmer's card is influenced by perceived usability and ease of use. According to the results, it is indicated that the functional aspects of the farmer's card are considered important to be developed for farmers. This study also provides several important implications for implementing the farmer card program. The findings of this study identify six variables that influence farmers' interest in using farmer cards. Therefore, stakeholders need to understand the readiness and acceptance of farmers to technology and classify farmers into segments based on technology readiness and technology acceptance models. Stakeholders can help farmers prepare and accept farmer card programs with high variable values and reduce the concerns of farmers with low variable values. For example, extension workers/PPLs must provide intensive guidance and assistance to farmers in determining the allocation of fertilizers and the use of transactions so that farmers can accept subsidized fertilizers. The experience of using the farmer card in transactions is very important to motivate and involve farmers. In the end, the government can maintain the farmer card program for the long term and maximize other programs related to fertilizer subsidies.

CONCLUSION

Conclusion

Based on the results of research on the factors of readiness and acceptance that affect interest in using the farmer card based on the Technology Readiness and Acceptance Model (TRAM) in Sumenep Regency, it shows that the optimism variable on perceived usefulness and perceived ease of use of the farmer card has a significant effect, discomfort has a significant effect on The perceived

usefulness of the farmer card, the perceived usefulness and perceived ease of use have a significant effect on the behavioral intention to use the farmer card. This shows that behavioral intention to use farmer card is influenced by perceived usefulness and perceived ease of use. However, testing the effect of innovativeness and insecurity on the perceived usefulness and ease of use of the farmer card has an insignificant effect. Discomfort has no significant effect on the perceived ease of use of the farmer card. It can be concluded that farmer cards in Sumenep Regency are considered useful by farmers of relatively less productive age, so the use value is less than optimum.

Suggestion

Several limitations have been identified and acknowledged in this study. First, most farmers in this study (50.4%) are relatively old. Relatively old samples tend to be less responsive to changes in new technology. Farmer cards will gradually develop and be used in all regions in East Java Province. Therefore there should be a youth movement (who have productive age) in the on-farm sector. Second, there are farmers in this study with a land area of more than two hectares, which means that it is not following the eRDKK requirements. There should be an evaluation of farmer members conducted by stakeholders so that the allocation of subsidized fertilizers is right on target.

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