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# Adoption of the Agriculture Application by Farmers Using the UTAUT2 Method Focused on Community Behavior and User Experience

**Yeffry Handoko Putra, Lia Warlina, Dina Fatimah, Wantoro, Selfa Septiani Aulia**
Universitas Komputer Indonesia

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**ABSTRACT**

At the moment, there is a rising penetration of mobile phone use, especially in rural areas, which generates information in the agricultural sector. The advancement of information and technology through mobile phones, particularly smartphones, can help farmers quickly access the most up-to-date information and impact better decision making. Farmers' Adoption of Digital Agricultural Applications Using the UTAUT2 Method with a Focus on User Behavior and Experience in Developing Information Technology Acceptance Policies in the Districts of Lembang and Parongpong, Bandung Regency. According to the findings of this survey, there are 8% male farmers and 14% female farmers. The majority of responses were in the age range of 41-50 years, as much as 44%, and the majority of farming time is less than 10 years, with a proportion of 59%. A person's experience with agricultural applications helps to moderate the behavioral intention variable, which influences the Use Intention variable, and a person's experience with agricultural applications helps him to believe in and take advantage of opportunities to grow his agricultural business.



***Corresponding Author:***

Yeffry Handoko Putra
Postgraduate Department
Universitas Komputer Indonesia
Email: yeffryhandoko@email.unikom.ac.id

## 1. INTRODUCTION

According to the BPS National Labour Force Survey, as many as 20.62% of Indonesian youth worked in the agriculture industry in August 2020, an increase from 18.43% in the preceding period. Because ICT users in Indonesia are now dominated by productive age, the increase in the number of youth in the agricultural sector during the Covid-19 pandemic is an opportunity to develop the agricultural sector supported by Information and Communication Technology. As much as 85.62% of the workforce has access to the internet and has the potential to be early adopters of digital technology in the agriculture sector (Setiawan, 2021). There are 2 (two) challenges in using digital agricultural applications by farmers. First, the government generally has not prioritized the adoption of digital technology in the agricultural sector. Second, the low literacy of digital farmers (Mercycorps &

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Rabobank, 2020). Digital infrastructure in Indonesia is also still weak and uneven, out of 137 countries being assessed, Indonesia is ranked 112 (Mercy Corps and Agrifin, 2020).

At present, the penetration of the increase in the use of mobile phones, even in rural areas, which produces information in the agricultural sector is increasing [1]. Development of information and technology through mobile phones, especially smartphones can facilitate farmers to access the latest information quickly and can influence better decision making. Several studies identified that farmers' participation in the use of information and communication technology has a positive impact on agriculture, such as buying agricultural seeds, fertilizers, and soil and labor productivity [2]. Age and education level variables have a relationship with farmers' ability to operate smartphones to search for various types of agricultural information [3]. There are 55 agricultural digital technologies in Indonesia. The digital technology is still in its early stages (seed or early ventures). Currently, 60% of agricultural digital applications in Indonesia are still targeting digital information such as market information or prices. While the other 40% focus on market access and almost a third targeting the supply chain and data management area. The rest are financial services and precision agriculture such as the use of satellites, sensors and agricultural mechanization [4].

The purpose of this study is to discover how farmers use agricultural application technology to enhance agricultural development in rural areas. It will also be discovered the relationship between user behavior and user experience in agricultural applications utilizing the UTAUT2 Method to construct recommendation.

## 2. RESEARCH METHOD

### 2.1. Research Location

Aside from Indonesia, Malaysia has a problem with farmers using agricultural applications to increase output. Based on discussions with researchers from the Mara - Cawangan - Kelantan University of Technology, a study was planned to determine how farmers in both countries use smart phones and digital agricultural applications. Farmers in Kelantan are the research subjects for Universiti Teknologi Mara (UiTM)-Malaysia, whereas farmers in West Bandung Regency are the subjects for Universitas Komputer Indonesia (UNIKOM). West Bandung Regency was chosen since it is the nearest agricultural sector to the university. The agricultural areas under investigation are vegetable producers in Cikidang, Lembang District, and decorative plant growers in Parongpong District.

### 2.2. Model of User Acceptance

Venkatesh and colleagues [5] created the UTAUT model by merging eight leading technology acceptance models based on their accuracy in forecasting expected and actual system usage behavior. Theory of Reasoned Action (TRA) [6]. Technology Acceptance Model (TAM) [7], Motivation Model (MM) [8] , Theory of Planned Behavior (TPB) [9] , Combined TAM and TPB [10] , Model of PC Utilization (MPCU) [11] , Independence Theory (IDT) [12] ,and Social Cognitive Theory [13] are the eight models. The predictive capability of the hybrid UTAUT model improves to 70% after the integration of eight models, which is significantly higher than the value for each model independently. UTAUT includes four categories that are thought to be direct predictors of behavioral intentions and subsequent technology use. These four key determinants are:

- Performance Expectation, defined as the user's level of trust that using the system will assist him in achieving the expected task performance.
- Effort Expectation, which is defined as the ease with which the system may be used.
- Social Influence, which is described as a person's level of importance in using the system.
- Facilitating Condition, defined as a person's level of confidence that the organization has given the necessary facilities and Infrastructure to facilitate the system's use.

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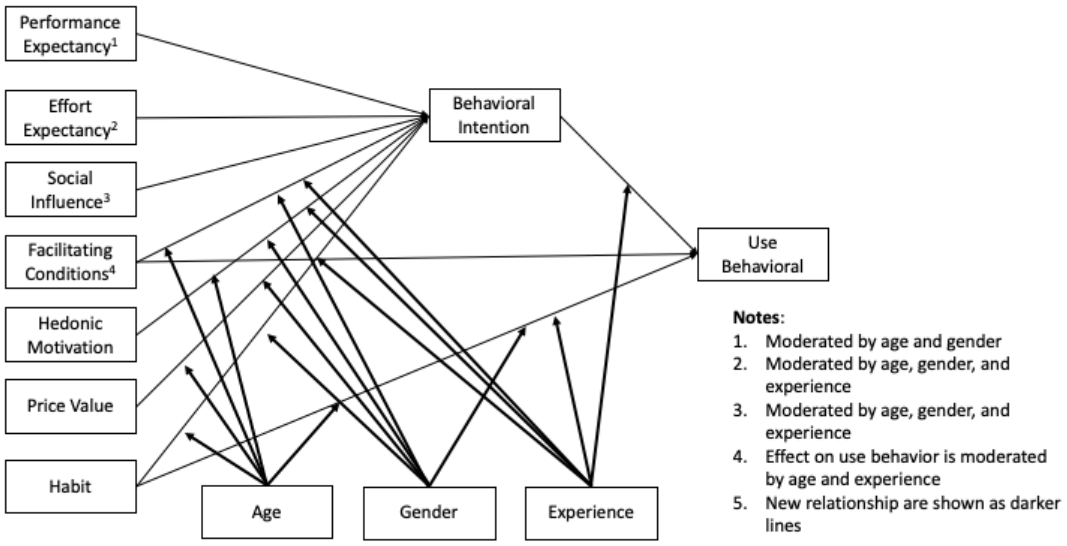


**Figure 1**. Model of the Unified Theory of Acceptance and Use of Technology (UTAUT2).

Venkatesh et al [14] feel that age, age, experience, and voluntary willingness to utilize the system determine the most important key relation in the UTAUT model. The Theory of Acceptance and Use of Integrated Technology (UTAUT) [15]10] has been utilized as a foundational framework in a number of research to assess technology use and adoption [16] [17]. To solve UTAUT's limitations, aspects of consumer influence, automaticity, and monetary costs are then added into the UTAUT2 model [18]. The UTAUT2 framework incorporates four constructs from the UTAUT model (performance expectancy, effort expectancy, social influence, and facilitating conditions) as well as three new constructs (hedonic motivation, price value, and habit) as antecedents of behavior intention and use (as shown on **Figure 1**). Literature Study about UTAUT2 research can be shown at Table 1

**Table 1**. UTAUTT2 Model in related research

| Study cited (author & year) | Domain of measure | Item used / variables | Results | |
|---|---|---|---|---|
| | | | Supported | Not Supported |
| Ally and Gadner [19] | Consumer acceptance of smart mobile technology) | Hedonic Motivation, Facilitating conditions, habit, social influence, Price value | Conceptual Study | |
| LaRose et al [20] | Adoption of broadband Internet | Habit, behavioral intention | HB→BI | -- |
| Vinodh and Mathew [21] | Role of web personalization in technology acceptance in consumer context (e-governance domain) | Performance expectancy, Effort expectancy, Facilitating condition, Hedonic motivation, Price Value, Habit, Behavioral intention | PE→BI<br>SI→BI<br>HB→BI<br>PV→BI | EE→BI<br>FC→BI<br>HM→BI |
| Cohen et al [22] | Acceptance of e-prescribing technology in African context | Performance expectancy, Effort expectancy, Social Influence, Facilitating condition, price, Acceptance of e-prescribing | PE→Acceptance<br>FC→Acceptance | EE, SI, PV→Acceptance |

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| | | | | |
|---|---|---|---|---|
| Krisnaraju et al [23] | Influence of web personalization on consumer technology acceptance in e government setting | Performance expectancy, Effort Expectancy, Facilitating condition, Hedonic motivation, Price value, habit, behavioral intention | SI→BI<br>PV→BI<br>HB→BI | PE→BI<br>EE→BI<br>FC→BI<br>HM→BI |
| Lewis et al [24] | Adoption of emerging information technology in higher education classrooms | Performance expectancy, Effort Expectancy, Facilitating condition, Hedonic motivation, Habit, Behavioral intention, Use | PE→BI<br>PE→ Use<br>SI→ BI<br>HB→ BI<br>BI→ Use | EE→ BI<br>HM→ BI<br>SI→ Use<br>HB→ Use<br>HM→ Use |
| Martin [25] | User's acceptance and adoption of online music services | Performance expectancy, Effort Expectancy, Facilitating condition, Hedonic motivation, Price value, Habit, Behavioral intention, Use | PE, EE, SI,<br>PV→BI<br>PV→ BI<br>HM→ BI<br>HB→ BI<br>BI→ Use | ---- |
| Nikou and Bouwman [26] | Chinese's user behavior towards the adoption of mobile social network | Social Influence, Habit, Behavioral intention | SI, HB→ BI | --- |
| Raman and Don [27] | Pre-Service teacher's acceptance of learning management software | Performance expectancy, Effort Expectancy, Facilitating condition, Hedonic motivation, Habit, Behavioral intention, Use | PE, EE, SI, FC,<br>HM→BI<br>FC→Use<br>BI→Use | HB→BI<br>HB→Use |

**Table 1** shows the relation of each construct of UTAUT2 Method in the other research. The relation between construct can be solved by PLS (Partial Least Square) or SEM (Structural Equation Method)

**2.3. Research Variables**

The respondents were farmers in Lembang and Parongpong Districts. For each sub-district 60 respondents will be taken, a total of 120 respondents are farmers. Farmer Characteristic Variables include: (1) Gender; (2) Age; (3) Last Education; (4) Home Address; (5) Marital Status; (6) Family Status; (7) Number of family members working in agriculture; (8) Monthly Family Income; (9) Farming for a Long Time; (10) Developed plant varieties; (11) Ownership of a Smartphone; (12) Previously used the Digital Agriculture Application; (13) Types of Digital Agriculture Applications; (14) Time spent using digital agriculture applications.

The variables used in this study are 9 variables: (1) Performance Expectancy (PE); (2) Effort Expectancy (EE); (3) Social Influence (SI); (4) Facilitating Conditions (FC); (5) Hedonic Motivation (HM); (6) Price Value (PV); (7) Habits (HB); (8) Behavioral Intention (BI); (9) User Behavior (UB). **Table 2** condenses the nine variables into a series of questions with 7 level.

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**Table 2**. The variables and a list of questions for the farmers who participated in the survey.

| Variables | Label | Questionnaire |
|---|---|---|
| Performance Expectancy (PE) | $PE_1$ | I believe that the farming application that I use is quite useful in carrying out many transactions in my daily life. |
| | $PE_2$ | I believe that the agricultural apps I use improve the efficiency of my farming operation. |
| | $PE_3$ | I believe that the farming app I use speeds up the resolution of sales issues. |
| | $PE_4$ | I believe that the farming apps I use increase the yield of my farm. |
| Effort Expectancy (EE) | EE1 | I find the farming software I use to be simple to use. |
| | EE2 | I find the farming app that I use easy to understand |
| | $EE_3$ | I believe that the agricultural application I use is always up to date with my requirements. |
| | $EE_4$ | I find it easy to become skilled at using farming apps |
| Social Influence (SI) | $SI_1$ | I use the farming app because my neighbors do, and I believe it is necessary to keep up. |
| | $SI_2$ | I use the agricultural application because important people / famous people / people I admire use the agricultural application so I feel it is important to follow it |
| | $SI_3$ | I use agricultural applications since people provide testimonials regarding the benefits acquired from these agricultural applications, so I use them as well. |
| | $SI_4$ | I use farming apps because people whose opinion I respect prefer using farming apps |
| Facilitating Conditions (FC) | $FC_1$ | I have a smart phone that can be used for agricultural applications |
| | $FC_2$ | I have enough internet bandwidth (internet quota) to use agricultural programs. |
| | $FC_3$ | I am knowledgeable enough to use farming apps. |
| | $FC_4$ | Application components such as buttons, links, in my opinion, are not difficult to understand and use |
| Hedonic Motivation (HM) | $HM_1$ | I enjoy using farming applications. |
| | $HM_2$ | I am addicted to agricultural applications. |
| | $HM_3$ | I believe that using agricultural applications is more prudent. |
| | $HM_4$ | I appreciate using the Farming app for everything from minor to major needs. |
| Price Value (PV) | $PV_1$ | I feel that the price to get the application and the benefits obtained are reasonable |
| | $PV_2$ | As a user, I believe the farming application's services have met my expectations. |
| | $PV_3$ | I believe that the farming application's services have truly satisfied me as a user. |
| | $PV_4$ | If the farming app becomes a paid app, I'm willing to pay. |
| Habit (HB) | $HB_1$ | I'm used to utilizing farming apps and don't want to switch. |
| | $HB_2$ | I'm used to utilizing farming programs, but I'm open to trying out others. |

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| | | |
|---|---|---|
| | HB3 | If I need information, I always seek it up in farming apps. |
| | HB4 | If I need information, I always seek it up in farming apps. |
| Behavior Intention (BI) | BI1 | Instead of traditional transactions, I'd like to employ internet applications. |
| | BI2 | I'm not just attempting, but rather actively seeking benefits from the program that I utilize. |
| | BI3 | I will provide a testimonial for this agriculture application since I believe it is important to recommend it to potential consumers. |
| | BI4 | As I feel the need to rate various agricultural applications, I will present a ranking of them. |
| Use Behavior (UB) | UB1 | I use agricultural applications to market the results of my farming business |
| | UB2 | I utilize an agriculture application to find out who the supplier of agricultural inputs is. |
| | UB3 | To find the most recent agriculture technology knowledge, I use an agricultural application. |
| | UB4 | I use an agricultural application to find information on assistance and subsidies provided by the government and the private sector for my farming business |
| | UB5 | I use agricultural applications to look for opportunities to develop my farming business |

## 3. RESULTS AND DISCUSSIONS (10 PT)

An overview of the area and the farmers' features will be explained in the discussion of the socioeconomic characteristics of vegetable and ornamental plant horticulture farmers. The respondents are vegetable horticultural growers from the Lembang District. The location of the ornamental plant horticulture farmer responses is in the Parongpong District. Based on the results of field survey data processing from 120 respondents, vegetable and ornamental plant farmers in Lembang and Parongpong Districts who use agricultural applications, the characteristics of vegetable and ornamental plant farmers in this study will be explained based on gender, age, income, and long experience of farming.

### 3.1. Agricultural application adoption model based on male users' gender

The majority of vegetable and ornamental plant farmer responders (120 in total) were male. While the number of women is smaller, up to 18 people. According to the findings of the field survey, male farmers are more likely to participate in combined farmer groups. Farmers for vegetables and ornamental plants are 86 percent male and 14 percent female. Male farmers outnumber female farmers in terms of food and ornamental plant production.

**Figure 2** depicts the agricultural application adoption model based on the sex of male users, and Table 3 depicts the testing of its validity, while Table 4 depicts discriminant validity, and Table 5 depicts the hypothesis test. When using an outer path limit of 0.7 and filtering the data for male users (**Figure 2**), it is clear that the variables PV4, HB2, and UB4 have values that are insufficient to support them. In other words, male user replies do not agree if the program they use is free, and the user has no intention of using agricultural software to obtain government subsidies. Male users do not prefer to switch between farming programs; they are pleased with only one farming application.

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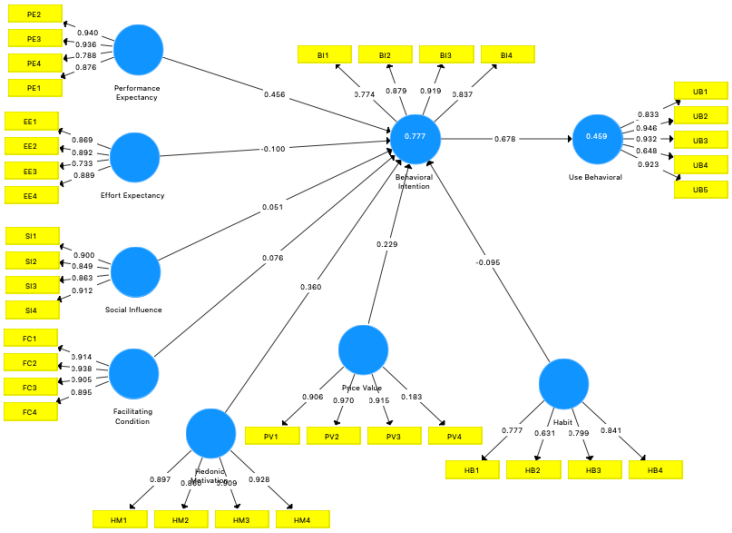


**Figure 2.** Agricultural application adoption model based on male users' gender

The validation test (**Table 3**) shows that the Cronbach Alfa correlation value for all indicators is greater than 0.7. With 108 participants, the apparatus utilized was adequate for this investigation.

**Table 3.** Test the validity of the agricultural application adoption model based on gender

| | Cronbach's Alpha | rho_A Composite | Reliability Average | Variance |
|---|---|---|---|---|
| Behavioral Intention | 0.875 | 0.887 | 0.915 | 0.720 |
| Effort Expectancy | 0.868 | 0.890 | 0.911 | 0.720 |
| Facilitating Condition | 0.934 | 0.994 | 0.953 | 0.834 |
| Habit | 0.749 | 0.804 | 0.851 | 0.655 |
| Hedonic Motivation | 0.921 | 0.929 | 0.944 | 0.808 |
| Performance Expectancy | 0.908 | 0.918 | 0.936 | 0.787 |
| Price Value | 0.923 | 0.925 | 0.951 | 0.867 |
| Social Influence | 0.907 | 0.994 | 0.933 | 0.777 |
| Use Behavioral | 0.934 | 0.939 | 0.953 | 0.836 |

Meanwhile, as shown in **Table 4**, the questionnaire covers all ranges of indicators with discriminant values more than 0.9, such as facility conditions, pricing values, and behavioral circumstances. Indicators with discriminants of 0.9 indicate that the questionnaire should be modified so that users can more precisely understand the meaning of the questionnaire. However, because the discriminant value of each variable was greater than 0.8, the male respondents comprehended the questionnaire adequately.

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**Table 4.** The discriminant validity of the agricultural application adoption model based on male users' gender

| | Behavioral Intention | Effort Expectancy | Facilita-ting Condition | Habit | Hedonic Motivation | Perfor-mance Expectancy | Price Value | Social Influence | Use Beha-vioral |
|---|---|---|---|---|---|---|---|---|---|
| Behavioral Intention | 0.854 | | | | | | | | |
| Effort Expectancy | 0.654 | 0.848 | | | | | | | |
| Facilitating Condition | 0.578 | 0.666 | 0.913 | | | | | | |
| Habit | 0.721 | 0.746 | 0.681 | 0.810 | | | | | |
| Hedonic Motivation | 0.837 | 0.635 | 0.586 | 0.705 | 0.899 | | | | |
| Performance Expectancy | 0.813 | 0.860 | 0.694 | 0.836 | 0.789 | 0.887 | | | |
| Price Value | 0.776 | 0.626 | 0.417 | 0.717 | 0.819 | 0.745 | 0.931 | | |
| Social Influence | 0.298 | 0.165 | 0.176 | 0.381 | 0.301 | 0.278 | 0.218 | 0.881 | |
| Use Behavioral | 0.692 | 0.732 | 0.744 | 0.824 | 0.740 | 0.829 | 0.679 | 0.344 | 0.914 |

**Table 5.** Test the hypothesis about the agriculture application adoption model based on male users' gender.

| | Original Sample | Sample Mean | Standard Deviation | T Statistic | P Value |
|---|---|---|---|---|---|
| Behavioral Intention -> Use Behavioral | 0.692 | 0.691 | 0.084 | 0.8225 | 0.000 |
| Effort Expectancy -> Behavioral Intention | -0.101 | -0.083 | 0.151 | 0.671 | 0.503 |
| Facilitating Condition -> Behavioral Intention | 0.054 | 0.014 | 0.226 | 0.241 | 0.810 |
| Habit -> Behavioral Intention | -0.006 | -0.032 | 0.224 | 0.026 | 0.979 |
| Hedonic Motivation -> Behavioral Intention | 0.371 | 0.359 | 0.223 | 1.665 | 0.097 |
| Performance Expectancy -> Behavioral Intention | 0.415 | 0.414 | 0.240 | 1.729 | 0.084 |
| Price Value -> Behavioral Intention | 0.201 | 0.255 | 0.217 | 0.927 | 0.355 |
| Social Influence -> Behavioral Intention | 0.037 | 0.060 | 0.138 | 0.265 | 0.791 |

**Table 5** shows that certain hypotheses, including behavioral intention influencing behavioral use, have been proven, while others have not. This demonstrates the need for a moderation indicator to remedy the situation. In this study, the moderating indicators considered are user experience in

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farming, user experience with agricultural applications, and user confidence that agricultural applications can be valuable for their agricultural business.

### 3.2. Farming Experience-Based Agricultural Application Adoption Model

In this study, respondents from vegetable and decorative plant growers had more than 8 months of agricultural applications. There were 75 farmer responders, or 79 percent, who said they had used agricultural applications for more than 8 months. Meanwhile, 14 percent of farmer responders, or 13 people, said they used agricultural apps for 4-8 months. This phenomenon is suitable when compared to the age of the farmer responders who are in productive age. **Figure 3** depicts the agricultural application adoption model based on farming experience, while **Table 6** depicts the validity test. **Table 7** shows discriminant validity, whereas **Table 8** shows hypothesis test validity.

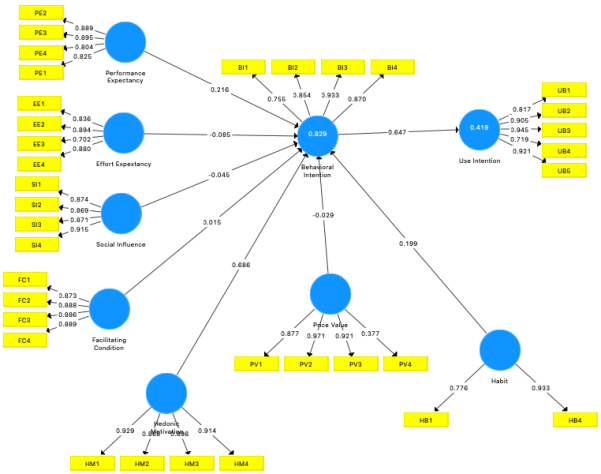


**Figure 3.** Farming Experience-Based Agricultural Application Adoption Model

The value of the outer path in **Figure 3** is derived from filtered data for users with more than ten years of agricultural experience. Not all markers have a significant influence on research variables. If a limit of 0.7 is chosen, PV4, the user's willingness to pay if the agricultural application utilized at any time requests payment for specific services, is the indication that has no major effect on the study variable. Respondents with more than ten years of farming experience do not favor being paid or being asked to pay for a service on a regularly used agricultural application at any time.

**Table 6**. Test the validity of the agricultural application adoption model based on experience

| | Cronbach's Alpha | rho_A | Reliability Average | Variance |
|---|---|---|---|---|
| | | Composite | | |
| Behavioral Intention | 0.875 | 0.887 | 0.915 | 0.720 |
| Effort Expectancy | 0.868 | 0.890 | 0.911 | 0.720 |
| Facilitating Condition | 0.934 | 0.994 | 0.953 | 0.834 |
| Habit | 0.749 | 0.804 | 0.851 | 0.655 |
| Hedonic Motivation | 0.921 | 0.929 | 0.944 | 0.808 |
| Performance Expectancy | 0.908 | 0.918 | 0.936 | 0.787 |
| Price Value | 0.923 | 0.925 | 0.951 | 0.867 |
| Social Influence | 0.907 | 0.994 | 0.933 | 0.777 |
| Use Behavioral | 0.934 | 0.939 | 0.953 | 0.836 |

The validation test (**Table 6**) shows that the Cronbach Alfa correlation value for all indicators is more than 0.7. The apparatus utilized for this investigation is acceptable for the quantity of respondents. Meanwhile, as shown in Table 7, the questionnaire covers all ranges of indicators with a

discriminant value more than 0.9, such as Hedonic Motivation and price value. Indicators with discriminants of 0.9 indicate that the questionnaire should be modified so that users can more precisely understand the meaning of the questionnaire. However, because the discriminant value of each variable is greater than 0.8, respondents with more than ten years of farming experience understand the questionnaire.

**Table 7.** Agricultural application adoption model discriminant validity based on farming experience

| | Behavioral Intention | Effort Expectancy | Facilita-ting Condition | Habit | Hedonic Motivation | Perfor-mance Expectancy | Price Value | Social Influence | Use Beha-vioral |
|---|---|---|---|---|---|---|---|---|---|
| Behavioral Intention | 0.855 | | | | | | | | |
| Effort Expectancy | 0.630 | 0.831 | | | | | | | |
| Facilitating Condition | 0.443 | 0.544 | 0.884 | | | | | | |
| Habit | 0.697 | 0.727 | 0.500 | 0.858 | | | | | |
| Hedonic Motivation | 0.882 | 0.591 | 0.396 | 0.611 | 0.903 | | | | |
| Performance Expectancy | 0.773 | 0.845 | 0.552 | 0.775 | 0.729 | 0.854 | | | |
| Price Value | 0.764 | 0.639 | 0.324 | 0.615 | 0.824 | 0.741 | 0.928 | | |
| Social Influence | 0.301 | 0.181 | 0.158 | 0.375 | 0.336 | 0.273 | 0.196 | 0.883 | |
| Use Behavioral | 0.647 | 0.705 | 0.581 | 0.611 | 0.754 | 0.754 | 0.680 | 0.413 | 0.865 |

Several hypotheses have been proved by Table 8, including behavioral intention influencing behavioral use and hedonic motivation influencing behavioral intention. while the other possibilities remain unproven. This demonstrates the need for a moderation indicator to remedy the situation. In this study, the moderating indicator used is the user experience with agricultural applications and the user's conviction that agricultural applications may be valuable for their agricultural business.

**Table 8.** Test the hypothesis on the adoption model of agricultural applications based on experience

| | Original Sample | Sample Mean | Standard Deviation | T Statistic | P Value |
|---|---|---|---|---|---|
| Behavioral Intention -> Use Behavioral | 0.647 | 0.649 | 0.107 | 6.028 | 0.000 |
| Effort Expectancy -> Behavioral Intention | -0.085 | -0.064 | 0.142 | 0.599 | 0.549 |
| Facilitating Condition -> Behavioral Intention | 0.016 | -0.014 | 0.136 | 0.120 | 0.905 |
| Habit -> Behavioral Intention | 0.197 | 0.159 | 0.163 | 1.205 | 0.229 |

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| | | | | | |
|---|---|---|---|---|---|
| Hedonic Motivation -> Behavioral Intention | 0.680 | 0.644 | 0.172 | 3.961 | 0.000 |
| Performance Expectancy -> Behavioral Intention | 0.214 | 0.209 | 0.155 | 1.381 | 0.168 |
| Price Value -> Behavioral Intention | -0.019 | 0.059 | 0.189 | 0.101 | 0.920 |
| Social Influence -> Behavioral Intention | -0.044 | -0.020 | 0.102 | 0.428 | 0.668 |

### 3.3. Model of Agricultural Application Adoption with Two Moderating Variables

In this model, the moderating variable is the user's experience with agricultural applications (EX1) and the user's perception that agricultural applications can be valuable for their agricultural business (EX2). The model is shown in **Figure 4**.

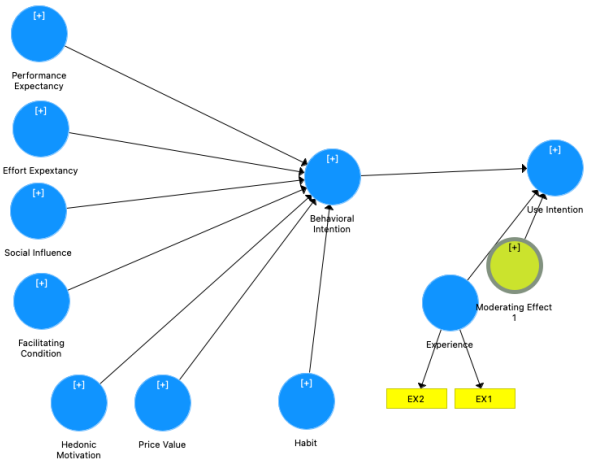


**Figure 4.** Model of Agricultural Application Adoption with Two Moderating Variables

**Table 9** shows which indicators change in response to the moderating variable. Only the EX2 moderation variable aids moderation in this model. Meanwhile, the EX2 Moderation Variable validates the HB3 indicator but not the HB3 and PV4 indicators. Alternatively, users that believe in agricultural applications will always hunt for information first in the agricultural applications that they are familiar with.

**Table 9.** Variable with Outer Loading Below 0.7

| Indicator | Without Experience Moderation Variable | With Experience Moderation Variable |
|---|---|---|
| HB2 | 0.431 | 0.594 |
| HB3 | 0.615 | 0.717 |
| PV4 | 0.377 | 0.284 |
| EX1 | -- | 0.014 |
| EX2 | -- | 0.998 |

**Table 10** shows that experience moderation can moderate the user's belief variable that agricultural applications can be useful in their agricultural business, resulting in three new hypotheses emerging in addition to the Behavioral Intention hypothesis influencing Use Intention, namely: (1) Hedonic Motivation influences Behavioral Intention and (2) Experience influences Use Intention.

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**Table 10.** Test the validity after being moderated

| | Original Sample | Sample Mean | Standard Deviation | T Statistic | P Value |
|---|---|---|---|---|---|
| Behavioral Intention -> Use Behavioral | 0.663 | 0.616 | 0.119 | 5.306 | 0.000 |
| Hedonic Motivation -> Behavioral Intention | 0.525 | 0.486 | 0.212 | 2.477 | 0.014 |
| Hedonic Motivation -> Use Intention | 0.332 | 0.304 | 0.151 | 2.199 | 0.028 |
| Performance Expectancy -> Behavioral Intention | 0.330 | 0.341 | 0.189 | 1.747 | 0.081 |
| Experience -> Use Intention | 0.290 | 0.301 | 0.109 | 2.658 | 0.008 |
| Performance Expectancy -> Use Intention | 0.209 | 0.207 | 0.118 | 1.775 | 0.077 |
| Price Value -> Behavioral Intention | 0.107 | 0.153 | 0.186 | 0.572 | 0.568 |
| Habit -> Behavioral Intention | 0.085 | 0.082 | 0.184 | 0.462 | 0.644 |
| Price Value -> Use Intention | 0.068 | 0.091 | 0.113 | 0.595 | 0.552 |
| Habit -> Use Intention | 0.054 | 0.049 | 0.111 | 0.482 | 0.630 |
| Social Influence -> Behavioral Intention | 0.013 | 0.023 | 0.099 | 0.135 | 0.893 |
| Social Influence -> Use Intention | 0.008 | 0.016 | 0.061 | 0.138 | 0.890 |
| Effort Expectancy -> Use Intention | -0.039 | -0.025 | 0.087 | 0.444 | 0.567 |
| Facilitating Condition -> Behavioral Intention | -0.069 | -0.102 | 0.177 | 0.391 | 0.696 |
| Moderating Effect 1 -> Use Intention | -0.119 | -0.111 | 0.236 | 0.502 | 0.616 |

## 4. CONCLUSION

There are 8% male farmers and 14% female farmers. The majority of responses were in the age range of 41-50 years, as much as 44%, and the majority of farming time is less than 10 years, with a proportion of 59%. A person's experience with agricultural applications helps to moderate the behavioral intention variable, which influences the Use Intention variable, and a person's experience with agricultural applications helps him to believe in and take advantage of opportunities to grow his agricultural business.

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