

The Planned Of Behaviour (TPB) Theory Approach To The Participation Of Farmers (P3A) And Local Governments In Participating Of Agricultural Systems, Case Study : Jatiluhur East Tarum Main Canal, Subang Regency

A W H Soeharno¹, T Andriana¹; A P Nugroho¹; E O Nugroho¹; A Mardiyono²; H Rachmadyanto²

¹Water Resources Engineering Research Group, Faculty of Civil and Environmental Engineering, Bandung Institute of Technology, Bandung 40132, Republic of Indonesia

²Public Company Jasa Tirta II, West Java Province

Abstract. In a previous study in Jatiluhur, the East Tarum Main Canal, Subang Regency, precisely in the Pawuletan SS which was attended by 3 (three) WUA namely Srijaya, Bangkit Jaya and Gondang Jaya with the application of the Planned of Behavior (TPB) theory method, Human Resources (Man Power) and Organizational Behavior with the implementation of Operation and Maintenance of irrigation networks which shows a significant influence on land productivity, in these results many assumptions are formed related to various aspects that affect farmers' welfare. Aspects taken to improve the welfare of farmers are taken from policy designs from countries that are good in terms of rice farming, one of which is Thailand. The purpose of this study is to obtain an overview of the behavior of farmers (WUA) and the local government in carrying out 5 (five) aspects that affect agricultural development in the Jatiluhur DI area, namely land use rights, agricultural credit or agricultural insurance, human resource development, Agricultural Regulations and Mechanisms in terms of the Planned Of Behavior (TPB) theory method which can provide a positive impetus to the behavior of the government and local farmers to carry out these aspects in the Jatiluhur Irrigation Area of the East Tarum Main Canal, Subang Regency. The results of the partial determination test show that Srijaya's WUA intentions have an influence on the intentions of the Binong District UPTD government, which is 92.1%. The results of the partial determination test show that the intentions of Gondang Jaya WUA have an influence on the intentions of the government of UPTD Gondang Jaya District, which is 83.6%. So it can be said that the intention (intention) of farmers in carrying out 5 (five) aspects that can improve the welfare of farmers in government programs influences the government to carry out these aspects in order to improve the welfare of farmers.

1. Introduction

In the Theory of Planned Of Behavior (TPB), Human Resources (Man Power) and Organizational Behavior (OB) showed a positive response given by these methods with the implementation of operations and maintenance irrigation network Irrigation Area SS Pawuletas Cs. The study also explains the value of the Human Development Index which is influenced by land productivity, because land productivity is part of the gross domestic product of the research area sub-district. With increased productivity, it is expected to increase the welfare of farmers, while according to the Ministry of Agriculture, [1] in fulfilling the achievement of farmer welfare, the need for an achievement of the level

of farmer welfare as measured by income per capita, poverty rate and the level of food insecurity of agricultural households.

Seeing this, there is a need for changes in the agricultural system that may have to improve following developments from other countries that are more developed or developing. In this case, many countries in Europe, Asia and America are successful with their agriculture, but don't look at countries that are indeed fast in technology, it may be difficult to compare, then look from the Southeast Asian region, many developing countries are successful in agriculture, one of them is Thailand.

F B M Dabukke, [2] explained explaining that Thailand is one of the world's largest rice exporting countries besides Vietnam and India. Rice is one of Thailand's main and leading agricultural commodities. Rice is also one of the priorities Thailand's main agricultural development in addition to other commodities such as sugar, corn, vegetables, and fruit which have become global products. The Thai government has the slogan "kitchen of the world". The slogan implies that Thailand strives to produce, distribute, and export agricultural products to the world market in full to meet the needs of global consumers for their "kitchen needs", starting from rice, meat, eggs, fish, vegetables, fruit, spices, to seasonings. and other products.

Various kinds of policies carried out by Thailand may be prioritized in order to increase the productivity of irrigated land, but to do that, do the government and farmers want to do this. There is a need for a method that measures the extent to which farmers and government intend to approach aspects of Thailand's policy with programs held in Indonesia. The theory of Planned of Behavior (TPB) is one method that can be used to measure the level of participation of farmers and the government through measuring individual intentions that are measured based on the behavior of each individual (farmers and local government). According to Ajzen [3], individuals will tend to display a certain behavior if they choose high intentions towards that behavior. Based on the Planned of Behavior (TPB) approach, it is expected to see a picture of a positive impetus to make changes to the agricultural system with a policy approach similar to Thailand by using existing policies in Indonesia to be prioritized first.

By learning from the Thai agricultural system which is considered very beneficial for farmers, it ensures the sustainability of agriculture in Indonesia. The things that need to be prioritized in improving the agricultural system in Indonesia are: (1) Land use rights; (2) Agricultural credit or Agricultural Insurance; (3) Human Resources Development; (4) Regulation; and (5) Agricultural Mechanization.

In this case WUA (Perkumpulan Petani Pemakai Air/P3A/Water User Association/WUA) as farmers and local governments have a very important role to develop their irrigation areas with the help of government programs with efforts to increase land productivity in carrying out 5 (five) points carried out with the Planned of Behavior (TPB) approach in an effort to find out the extent to which the intention of farmers to carry out government policies against the government's intention to run the existing agricultural system.

The purpose of this study is to find out the extent to which the Planned of Behavior (TPB) theory in WUA organizations (farmers) is related to the local government's intention to implement an agricultural system that is adopted as an approach from the Thai state by providing a positive influence in an effort to motivate the mindset and behavior of farmers. and the government to run a good agricultural system. The aims of this study are:

- Identifying Planned Behavior (Theory of Planned Of Behavior) WUA organization and local government in Jatiluhur Main Channel, Tarum Timur Subang Regency in terms of Attitude Toward Behavior, Subjective Norms, Perceived Behavioral Control and Intentions;
- Analyzing the relationship between the dependent variable Attitude Toward Behavior, Subjective Norm and Perceived Behavioral Control on the dependent variable intention;
- Analyzing the relationship between the dependent variable, the farmer's intention to the dependent variable, the local government's intention.

In the process of making this study, the number of WUA in DI Jatiluhur became an obstacle, but they were chosen based on the sub-district where WUA occupied, while the samples were Binong Sub-

district with WUA Srijaya and UPTD Agriculture, Binong Sub-district, then Tambakdahan Sub-district with WUA Gondang Jaya and UPTD Agriculture Gondang Jaya.

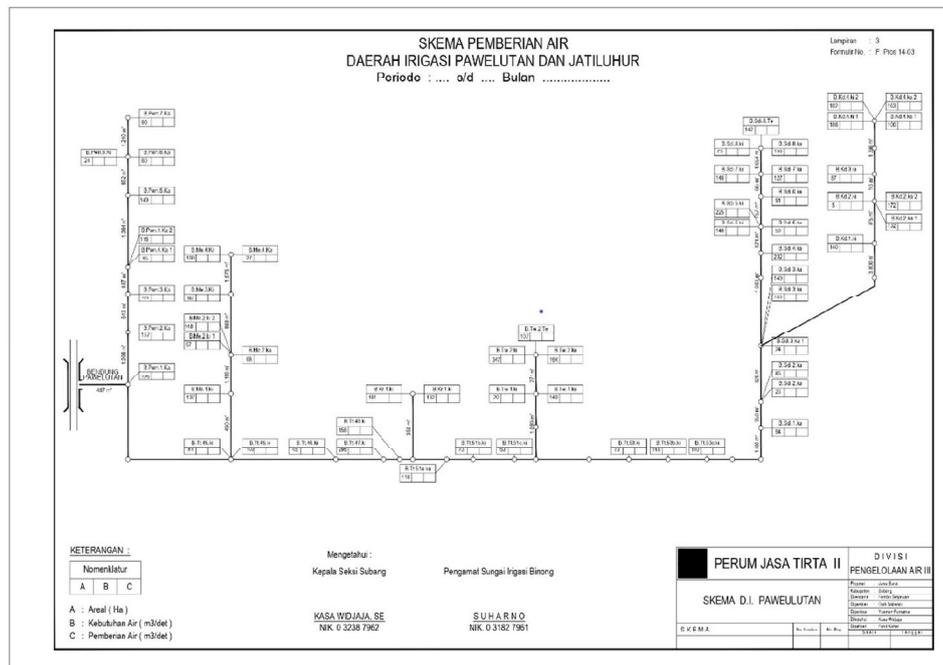


Figure 1. Irrigation scheme DI Pawuletan and DI Jatiluhur (PJT II, 2018)

2. Literature Review

According to Palan, [4] the competence of a farmer in farming is the embodiment of behavior to plan a series of activities to achieve the target. Competence refers to the ability of farmers in general to run a farming business or carry out their duties and job functions competently. Competent is the functional skills needed to carry out tasks on a job according to the standards set, or in other words competent is defined as having adequate skills and knowledge to carry out the work. In addition, competent farmers must be able to become skilled farm managers to carry out their duties such as planning a farming business, when is the right time to plant, harvest, market results, seek capital, control their farming business and others.

Law Number 16 of 2006 concerning Agricultural, Fisheries and Forestry Extension Systems mandates the institutional form of the main actors including groups, combined groups, associations, or corporations. That the main institutional actors are facilitated and empowered by the Government and/or Regional Governments in order to grow and develop into a strong and independent organization so as to be able to achieve the goals expected by its members. A Daryanto, [5] the agricultural sector in national development are :

- The issue of the importance of food and energy security;
- The problem of stagnant or declining farmer's exchange rate (Term Of Trade) from time to time;
- The tendency for higher unemployment rates and the number of poor people in rural areas;
- The problem of sustainable development and environmental preservation.

According to Nurhemi, [6] For Indonesia, food security in the Law of the Republic of Indonesia Number 18 of 2012 concerning food is defined as a condition of fulfilling food for households which is reflected in the availability of sufficient food, both in quantity and quality, safe, evenly distributed, and affordable.

According to T Widodo, [7] Modernization of agriculture in Indonesia which must involve the use of the latest technology, as well as the use of chemical fertilizers, insecticides, and pesticides, causes agricultural production costs to be expensive for farmers. Meanwhile, the selling price of agricultural products remains low. This free market policy resulted in a new paradigm, namely foreign agricultural products dominate the upper middle market segment which has high purchasing power, domestic products are in the lower middle market segment which has limited purchasing power. Thus forcing Indonesian farmers with low selling prices.

According to A Daryanto, [8] Sustainable agriculture is a philosophy; this is a farming system. This empowers farmers to work in tandem with natural processes to protect resources such as soil and water, while minimizing the impact of waste on the environment. At the same time, farming systems become more resilient, self-regulating and profits are maintained. Some of the basic problems faced by Indonesia in positioning it properly.

According to T Widodo, [7] Based on the facts about the problems of agriculture in Indonesia, there are three important points that must be considered in agricultural development in Indonesia

- First, with the current state of Indonesia's agriculture, what needs to be prioritized is how to create agricultural policies that ensure that farmers get their rights to the land, water and seeds they need to manage their farms;
- Second, how to develop a management of agricultural land resources that can guarantee the existence of a food security system for Indonesia;
- Third, how to protect and utilize natural resources in the form of germplasm owned by Indonesia, not only for the sake of developing the agricultural sector, but also for other sectors in the national economy of these countries, for the welfare of the people.

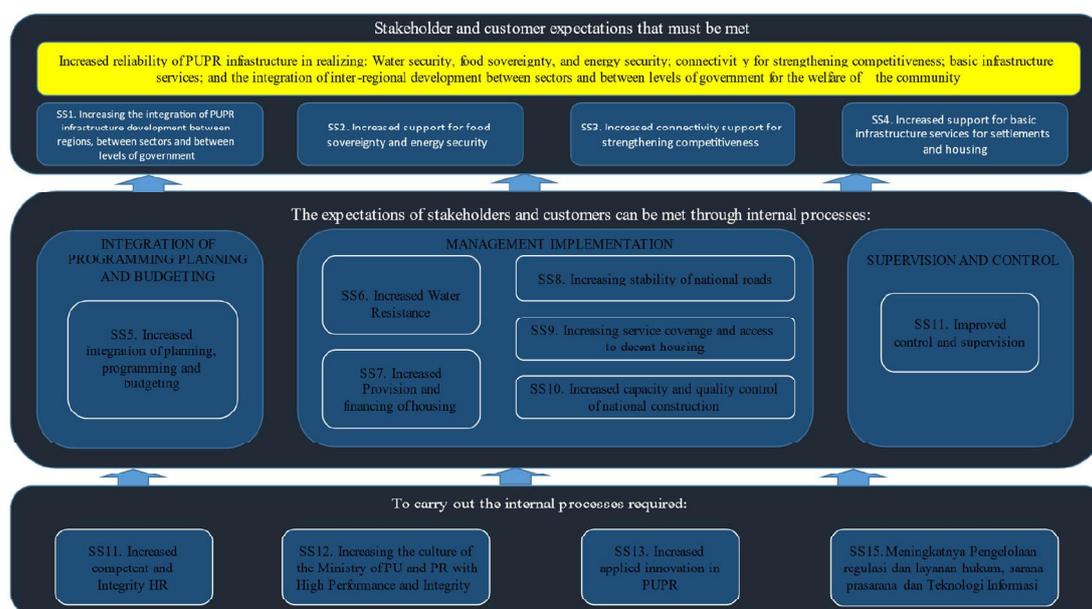


Figure 2. Strategy Map of the of Agriculture 2015-2019.

Based on the Strategic Plan of the Ministry of Agriculture 2015-2019 (Ministry of Agriculture, 2019) in Figure 2, the third phase of the RPJMN is focused on strengthening overall development by emphasizing the competitive development of the economy based on available natural resources, and depicted in the contribution of the agricultural sector in providing food, and industrial raw materials, contributors to GDP, foreign exchange earners, absorbers of labor. The strategic plan of the Ministry of Public Works and Public Housing for 2015 – 2019 (KemenPUPR, 2019) is to increase the reliability of

PUPR infrastructure in realizing it. food sovereignty, water security and energy sovereignty; connectivity for strengthening competitiveness; basic infrastructure services, and the balance of development between regions, between sectors and between levels of government so as to comply with the welfare of the community.

2.1. Thailand's Agriculture Policy

F B M Dabukke, [9] The vision of Thailand's agricultural development is "farmers get a better standard of living, people have food security, and the country gets income". Meanwhile, the goals are to:

- Increased farmer prosperity index to 80 percent in 2016;
- Increase in the economy of the agricultural sector by three percent per year;
- Proper use of resources to increase agricultural production.

Thailand's key agricultural policy strategies include:

- Development of farmer's quality of life (smart farmer);
- Development of agricultural production efficiency, management, and food security;
- Development of agricultural resources in an efficient, balanced and sustainable manner. The key strategies and main objectives of the country's agricultural policy can be seen in the table below.

Table 3. Credit policy and agricultural land in Thailand.

Policy	Description
Giving Credit Cards to Farmers	Since 2012 the government has issued 800 thousand units of credit cards for farmers with the aim that farmers; can have capital to harvest without getting stuck in debt; Credit cards issued by the Bank of Agriculture and Agricultural Cooperatives (BAAC) or Thailand's SOE BANK; This year (2013) will be issued two million units of credit cards; The provision of credit cards was accompanied by the launch of "farmer identity cards" to facilitate identification and distribution of subsidies and policies.
Agricultural Land Reform	Since 1975, he has carried out agricultural land reform by providing opportunities for smallholders to own agricultural land; Agricultural land is taken from state land, state land acquisition, land acquisition and king land.
Land Rights	A quarter of agricultural land is land for agricultural reform which is handled directly by the Ministry of Agriculture; Right to use certificate (Sor-Por-Kor-4-01) only for agricultural activities; The certificate cannot be transferred except to the heirs (who become farmers); If there are no heirs who become farmers, the certificate is returned to the Ministry of Agriculture to be distributed to farmers in need; As of August 2012, approximately 5.5 million hectares of land have been distributed to 2.5 million farming households.

Thailand should be used as a lesson for Indonesia. The two policies are: (1) Granting credit cards to farmers; (2) Agricultural land reform and land rights. The details of the two policies are presented in Table 3.

From this explanation, it is clear that it is necessary to prioritize in improving the agricultural system in Indonesia, namely : (1) Land use rights; (2) Agricultural credit or Agricultural Insurance; (3) Human Resources Development; (4) Regulation; and (5) Agricultural Mechanization.

2.2. Land Use Rights

According to the regulation of the Minister of Agriculture of the Republic of Indonesia Number 65 of 2019 In the implementation of land-based agricultural development, farmers have a central role and make a major contribution. Farmers generally do business on a small scale, namely the average area of the Farming Business is less than 0.5 (zero point five) hectares and even some farmers do not own their own farming business land or are called sharecroppers, who are farm laborers. This phenomenon shows an indication that smallholders are increasingly being pushed and helpless with a very narrow farming area.

2.3. Agricultural credit or Agricultural Insurance

The implementation of agricultural insurance is a mandate from law number 19 of 2013 concerning the protection and empowerment of farmers, article 37 paragraph (1) which reads "The Government and Regional Governments in accordance with their respective authorities are obliged to protect farming businesses carried out by farmers in the form of agricultural insurance". Agricultural insurance is carried out to protect farmers from crop failure losses due to: (1) Natural disasters; (2) Attack of plant-disturbing organisms; (3) Infectious animal disease outbreaks; (4) Impact of climate change; (5) Other types of risks are regulated by Ministerial Regulation.

2.4. Human Resource Development

According to Ministry of Agriculture, [1] Realizing the benefits of the existence of farmer groups, in the future the efforts that need to be made include :

- Increase the quantity and quality of farmer groups and associations;
- Provide technical guidance and assistance to strengthen capabilities both in terms of group management aspects, cultivation activities as well as in processing and marketing aspects;
- Expanding the types of farmer groups according to the field of business, for example the Integrated Pest Control group, Artificial Insemination, Water User Farmers Association, processing business group;
- Strengthening business capital for groups/group associations through the provision of capital assistance, as well as strengthening farmer group networks with field extension workers.

2.5. Regulation

According to Ministry of Agriculture, [1] Agricultural development in the next five years is based on the third National Medium-Term Development Plan (RPJMN) (2015-2019), where the RPJMN is the elaboration of the Vision, Action Program of President/Vice President Jokowi and Jusuf Kalla and guided by the National Long-Term Development Plan 2005-2025. The development vision in the 2015-2019 RPJM is "The Realization of a Sovereign, Independent and Personality Indonesia Based on Mutual Cooperation". The vision is translated into Seven Missions and Nine Priority Agendas (NAWA CITA). In the ideological aspect, PANCASILA JUNI 1 1945 and TRISAKTI became the nation's ideologies as a driving force, unifying the struggle, and as a guiding star.

2.6. Agricultural Mechanization

According to Andi Amran S. et al., [10] Agricultural mechanization is referred to as a socio-technical system because agricultural mechanization cannot be approached only from a technical point of view, but includes social interaction within the system that is indispensable. The implementation of agricultural mechanization development in Indonesia is also influenced by the state of economic development. Because, it will give birth to the form and direction of government policies to be taken, especially related to agricultural progress. The relationship between strategic environmental factors and

subsystems in an agricultural mechanization system. Therefore the concept of developing an agricultural mechanization system must be carried out based on the harmonious interaction between the four subsystems, namely: (1) the cultural subsystem or mindset, (2) the socio-economic subsystem, (3) the artifact subsystem, maximum with technology included in it, (4) non-human subsystem

2.7. Theory of Planned Behavior

The understanding of attitude is explained by S Azwar [11] and A Wiyono [12],[13]. Attitude is defined as a reaction or response that arises from an individual to an object which then gives rise to individual behavior towards the object in certain ways.

M Fishbein and I Ajzen, [14] argue that the ability of attitudes to predict behavior also depends on the compatibility between attitudes and behavior, or what is known as the law of compatibility (The Law Of Compatibility). M Fishbein and I Ajzen, [14] developed a theory of reasoned action (The Theory Of Reasoned Action), which 10 years later was refined by I Ajzen, [15] into a theory of planned behavior (The Theory Of Planned Behavior). Although different in several respects, these two theories have the same goal, which is to predict Voluntary Behavior based on attitudes towards behavior and other important variables.

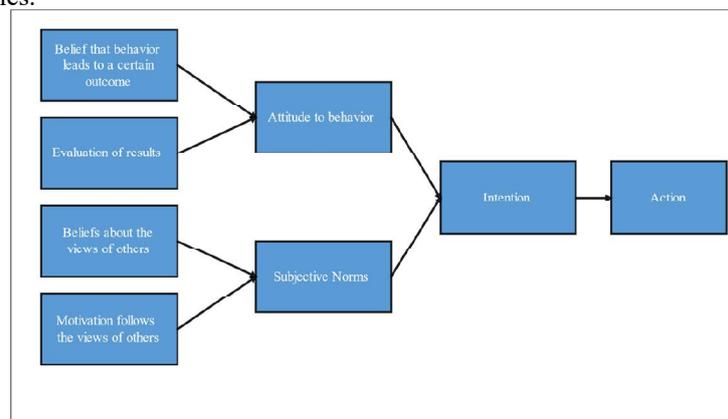


Figure 3. Schematic of the Theory of Reasoned Action from Martin Fishbein and Icek Ajzen [12].

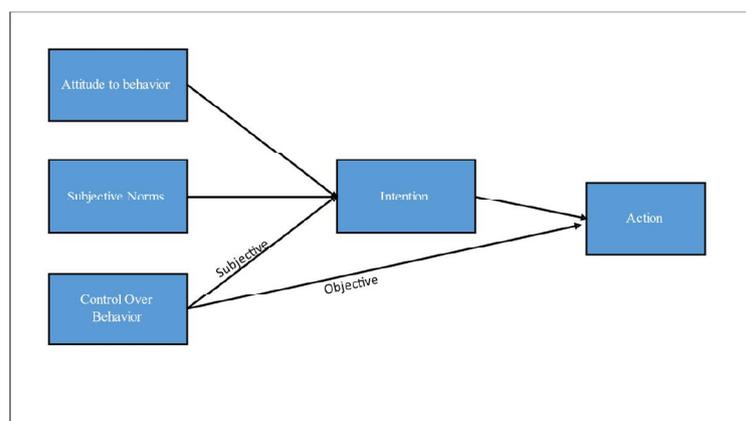


Figure 4. Schematic of the Theory of Planned Action from Icek Ajzen [13].

According to Rismanto, [16] explaining in Theory of Planned Behavior, the emergence of behavior is marked by individual intentions to behave. According to Ajzen, [17] Intention is also considered as the closest determinant of behavior so that it can be used as a predictor of certain specific behavior. Intentions are determined by the underlying factors, namely attitudes towards behavior (Attitude Toward

Behavior), subjective norms towards behavior (Subjective Norms), and perceptions of behavioral control (Perceived Behavioral Control). The following is an explanation of the determinants of intention and behavior. (Perceived Behavioral Control). The following is an explanation of the determinants of intention and behavior.

According to Ajzen, [17] Attitude Toward The Behavior is defined as the level of individual positive or negative assessment of a behavior. Attitude Toward the Behavior is determined by a combination of individual beliefs about the positive and or negative consequences of the behavior raised (Behavioral Beliefs) with a person's subjective value to the consequences of that behavior (Outcome Evaluation).

Subjective norm (Subjective Norm) is defined as a person's perception of pressure from the surrounding environment to perform or not perform a behavior. According to Ajzen (Rismanto, [16]) Subjective norms have two interacting components, namely normative belief, which is a belief about whether another individual who is a reference for a person will accept or not accept if the person displays certain behaviors. Coupled with how strong a person's motivation to obey the individual who is the reference (Motivation to Comply).

According to Ajzen (Rismanto, [16]) Perceived Behavioral Control (perception of behavioral control) is the ease or difficulty perceived by individuals in an effort to display behavior. The Perceived Behavioral Control has two aspects, namely Control Belief and Perceived Power. Control belief is a belief about any obstacles or facilities that exist within the individual to display behavior. It is also a belief about the extent to which individuals are sufficiently capable and confident in performing certain behaviors. Meanwhile, Perceived Power is the perceived power of the individual or the effect of the existing control factors in determining whether or not behavior appears.

According to Ajzen (Dian A.W., [18]) Intention is a competency of the individual which is based on the individual's desire to perform certain behaviors. Individual intentions to behave have limited time in realizing real behavior, so that in measuring intentions to behave, it is necessary to pay attention to four main elements of intentions, namely the target of the intended behavior (Target), action (Action), situation at the time the behavior is displayed (Context), and the time at which the behavior is displayed (Time).

3. Methodology

3.1. Research Stage

The research stage are as follows:

- Conducting a literature study by studying various basic theories, laws and regulations and related previous studies;
- Conduct a preliminary survey with direct observation and interviews. This preliminary survey is important to map various problems that actually occur in the field;
- Determine the method to be used to collect data. Related to this research, the methods to be used are direct observation, interviews, literature/document studies and filling out questionnaires;
- Develop a questionnaire variable to map organizational behavior so that indicators for the independent variable TPB Intention (X1) Attitude Toward Behavior (X1) Subjective Norm (X2) Perceived Behavioral Control (X3) are obtained
- Develop variables to map the Government's Intentions or the dependent variable Y;
- Filling out the TPB questionnaire;
- Calculation and recapitulation of the results of filling out the questionnaire;
- Analysis of the results of the questionnaire with the Ms program. Excel and IBM SPSS 23.0. This analysis includes: analysis of validity and reliability tests, continuum line analysis, correlation analysis and regression analysis. The regression analysis used consisted of: Partial Test Analysis (T test) and Simultaneous Test (F test), Coefficient of Determination Analysis, Multiple and Simple Regression Analysis;
- Interpretation of the results of the analysis and discussion;
- Preparation of conclusions and recommendations.

Table 4. Variabel Theory Planned of Behavior (TPB).

DIMENSIONS	SUB DIMENSIONS	INDICATOR
Attitude Toward Behavior, individual evaluation/assessment, both positive and negative towards the behavior of participating in changes in the agricultural system	Behavioral Belief, an individual's desire to play a role in the P3A Organization in readiness to change the agricultural system with the hope that the action (behavior) will be followed by the consequences. Outcome Evaluation, in the form of consequences that are assessed from the form of individual participation in the P3A Organization in readiness to change the agricultural system	Subjects can disclose the results of participating in the P3A Organization in the readiness to change the agricultural system regarding the benefits or disadvantages obtained. The subject gives an assessment of the consequences experienced when participating in the P3A Organization in readiness to change the agricultural system
Subjective Norms, a person's perception or view of the beliefs of others that will fulfill an interest in doing or not doing in participating for changes in agricultural systems	Normative Belief, is a belief about whether another individual who is a reference for someone will accept or not accept the role of participating in the P3A Organization in readiness to change the agricultural system. Motivation to Comply, a person's motivation to obey the individual who is his reference regarding his participation in participating or not participating in the P3A Organization in readiness to change the agricultural system	The subject expressed his belief that the individual who became his reference accepted/rejected if he chose to participate in the P3A Organization in readiness to change the agricultural system. The subject expresses his motivation in meeting the expectations of the individual who is his reference
Perceived Behavioral Control, the ease or difficulty perceived by individuals in an effort to participate in changes in the agricultural system.	Control Belief, belief about what obstacles or facilities exist within the individual to participate in the P3A Organization in readiness to change the agricultural system Perceived Power, the power perceived by the individual or the effect of the existing control factors in determining whether to participate or not participate in the P3A Organization in readiness to change the agricultural system	Subjek mengungkapkan jawaban terkait kemudahan serta hambatan dalam memilih ikut serta berpartisipasi di Organisasi P3A dalam kesiapan merubah sistem pertanian. The subject expressed the dispersing power to participate in the P3A Organization in readiness to change the agricultural system
Intention, the individual's intention to participate in changes in the agricultural system.	Direct Measurement	The subject shows his intention in his readiness to participate in implementing: A. Land use rights. B. Agricultural credit or Agricultural insurance C. Human Resource Development D. Regulation E. Agricultural Mechanization

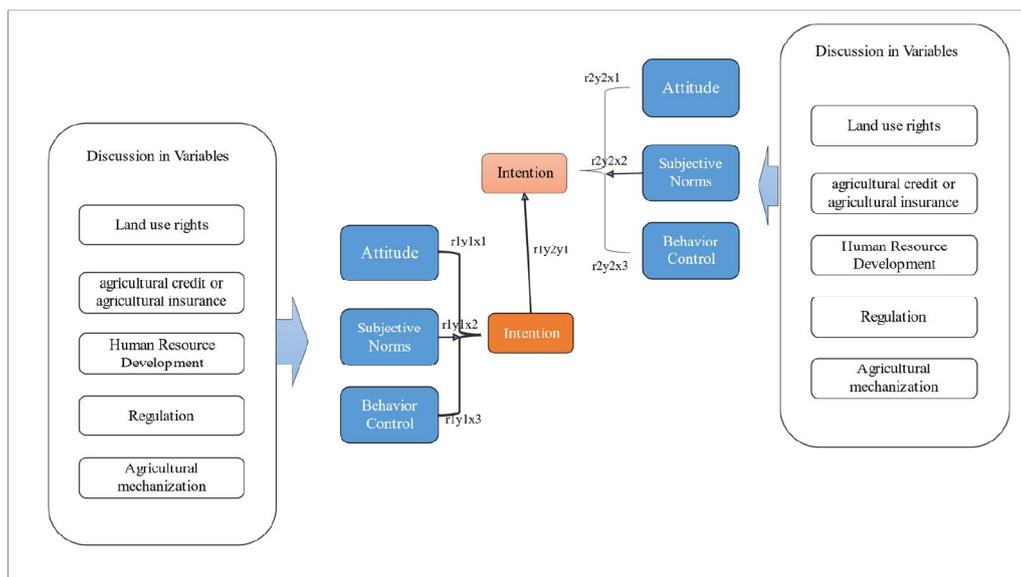


Figure 5. Research Variable Design Diagram

In this study the variables determined by determining the method that have been determined are divided based on each method and in this study only describes 2 (two) methods with the following variable provisions:

Description:

- X** = independent variable
- Y** = dependent variable for **X**
- Z** = variable outside the research evidence Intention

Advanced Description:

- X** = dependent variable for **Y**
- Y** = variable outside of research evidence Intention
- r_{1y1x1} = product moment correlation between variable y with variable 1 x1
- r_{1y1x2} = product moment correlation between variable y1 with variable 1 x2
- r_{1y1x3} = product moment correlation between variable y1 with variable 1 x3
- r_{1y2y1} = product moment correlation between variable y1 with variable y2
- r_{2y2x1} = product moment correlation between variable y2 with variable 2 x1
- r_{2y2x2} = product moment correlation between variable y2 with variable 2 x2
- r_{2y2x3} = product moment correlation between variable y2 with variable 2 x3

In the design of the main variables described, there is 1 method to be studied (The Theory of Planned Of Behavior (TPB)).

3.2. *Required Data*

The primary data in this study are data obtained from interviews and related questionnaires about two aspects of research on farmers on land productivity were distributed to respondents, administrators and WUA members on the Pawuletan Cs Secondary Channel in the DI Jatiluhur area, East Tarum Main Channel, Subang Regency.

Secondary data is data obtained from materials or documents collected and processed by other parties in the form of publications. For secondary data in this study are: (1) WUA Institution; (2) Condition of irrigation network physical infrastructure; (3) Crop productivity; (4) Supporting facilities; (5) General data on organization and personnel of OP officers; (6) Documentation.

The data was obtained from BBWS Citarum, Jasa Tirta II Public Company, Regional III Business Unit, Binong Section and the Department of Food Crops and Horticulture of West Java Province.

3.3. *Respondent*

According to Sugiyono, [19] Population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions. According to Sugiyono, [19] Cluster Sampling (Area Sampling) is used when the population does not consist of individuals, but consists of individual groups or clusters. Regional sampling technique is used to determine the sample if the object to be studied or the data source is very broad.

This study took WUA in SS Pawelutan because it met the large number of research samples that would be used as research material and besides that the area met the criteria for the dependent variable which was required to have the same factors supporting the productivity of the same land, namely having the same intake or water source. It is only differentiated based on the results of land productivity to find out what causes the difference in the productivity results. For the UPTD, two different sub-districts were selected, Binong and Tambak Dahan sub-districts, then WUA for the area, namely WUA Srijaya and Gondang Jaya Sections should be numbered with a dot following the number and then separated by a single space:

Table 5. Number of Samples.

INSTITUTION	NUMBER OF SAMPLES
UPTD Binong	22
UPTD Tambak Dahan	20
P3A Srijaya	22
P3A Gondang Jaya	20
JUMLAH	84

Regarding the sampling technique, Nasution, [20] states that the quality of research is not always determined by the size of the sample, but by the firmness of the theoretical foundations, the research design, and the quality of implementation and processing.

4. RESULTS AND DISCUSSION

Research data is a score obtained from respondents' answers to questions or statements regarding research variables, namely TPB Intentions (X1) Attitude Toward Behavior (Z1) Subjective Norms (Z2) Perceived Behavioral Control (Z3). These variables were analyzed using descriptive statistics and correlation analysis. Based on calculations using the cluster sampling technique, the samples selected in this study were WUA Srijaya, WUA Bangkit and WUA Gondang Jaya, totaling 84 respondents with 22 respondents for WUA Srijaya, and 20 respondents for Gondang Jaya WUA. And UPTD Binong 22 personnel and UPTD Tambak Branch 20 personnel.

4.1. Continuum Scale

This study uses a questionnaire as a tool to determine the extent to which the sample provides the information provided based on the questions attached to the questionnaire itself by using the assistance of the Planned Of Behavior (TPB) method as a method that can measure the extent to which the sample displays the intention to behave. The results of the questionnaire by WUA are presented on a continuum as follows:

a. Attitude Toward Behavior (ATB)

From the results of the questionnaire, the results with the Attitude Toward Behavior (ATB) variable are as follows:

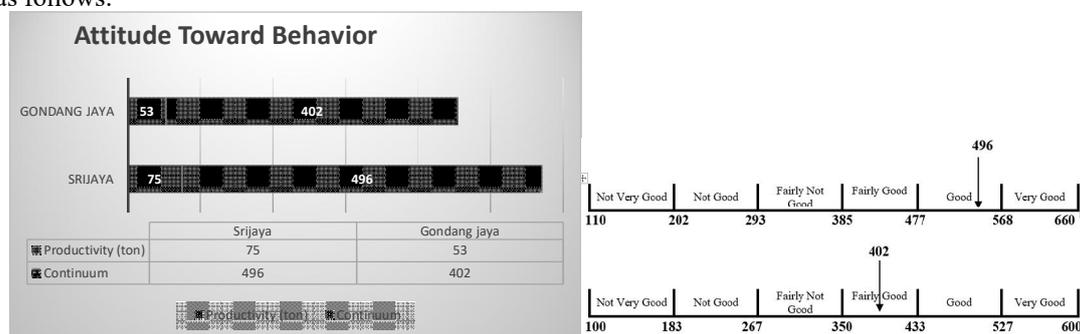


Figure 6. Continuum Line of ATB Variable for WUA Responses.

b. Subjective Norm (SN)

From the results of the questionnaire, the results obtained with the Subjective Norm (SN) variable are as follows:

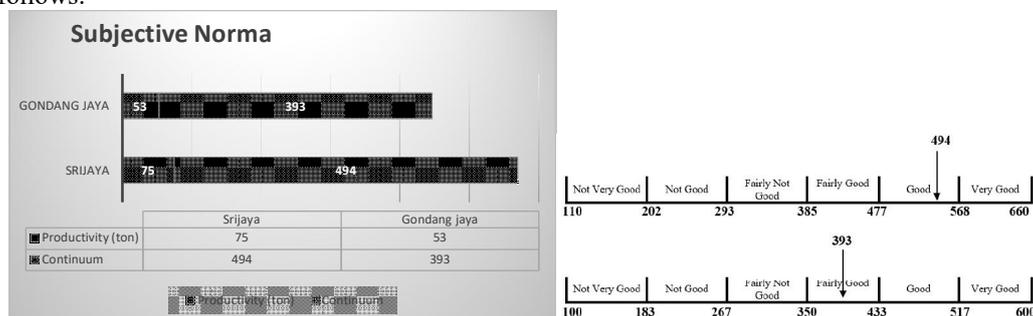


Figure 7. Continuum Line of SN Variable for WUA Gondang Jaya Responses.

c. Perceived Behavioral Control (PBC)

From the results of the questionnaire, the results obtained with the Perceived Behavioral Control (PBC) variable are as follows:

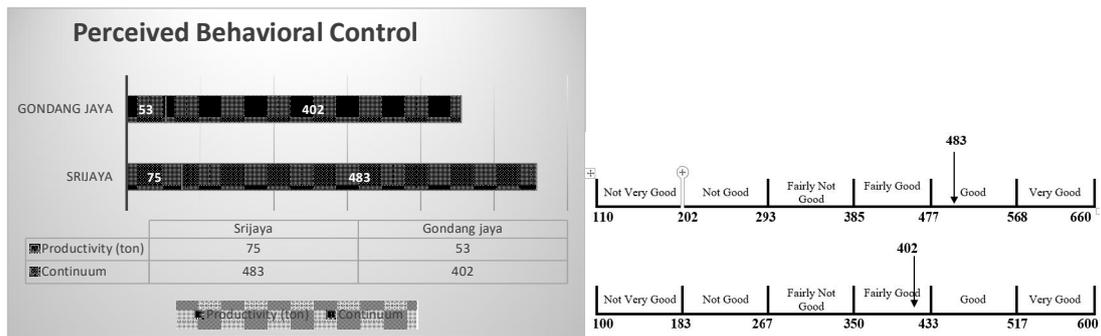


Figure 8. Continuum Line of PBC Variable for WUA Responses.

d. Intention (Intention)

From the results of the questionnaire, the results with the variable Intention (Intention) are as follows:

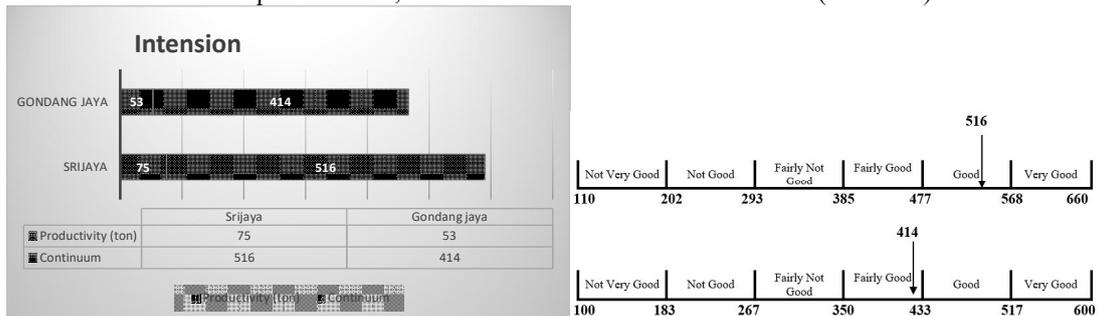


Figure 9. Continuum Line of Intension Variable for WUA Responses.

The results of the questionnaire by UPTD Agriculture are presented in a continuum as follows:

a. Attitude Toward Behavior (ATB)

From the results of the questionnaire, the results with the Attitude Toward Behavior (ATB) variable are as follows:

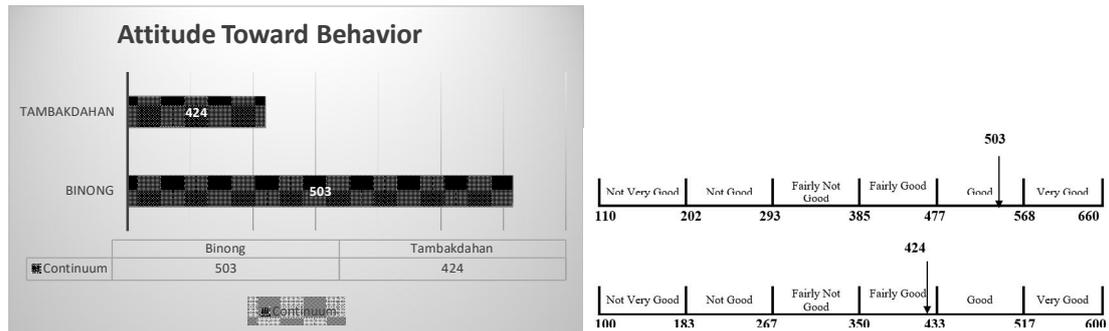


Figure 10. Continuum Line of ATB Variable for WUA Responses.

b. Subjective Norm (SN)

From the results of the questionnaire, the results obtained with the Subjective Norm (SN) variable are as follows:

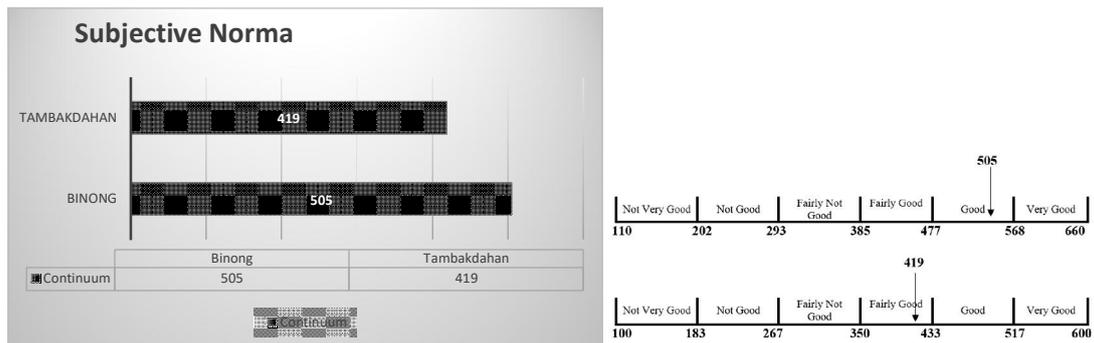


Figure 11. Continuum Line of SN Variable for WUA Responses.

c. Perceived Behavioral Control (PBC)

From the results of the questionnaire, the results obtained with the Perceived Behavioral Control (PBC) variable are as follows:

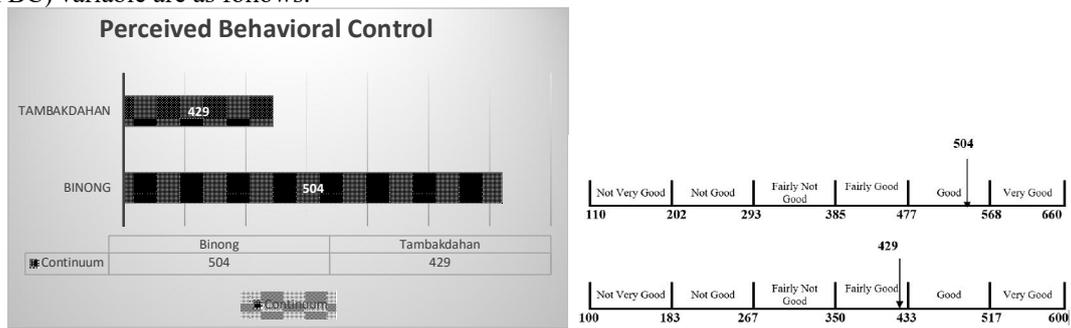


Figure 12. Continuum Line of PBC Variable for WUA Responses.

d. Intention (Intention)

From the results of the questionnaire, the results with the variable Intention (Intention) are as follows:

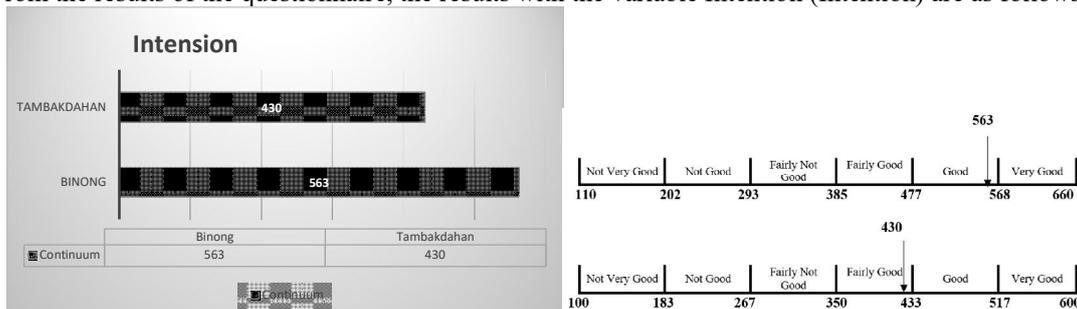


Figure 13. Continuum Line of Intention Variable for WUA Responses.

4.2. Analysis Results

Based on the calculation results from the discussion regarding the intentions of Water-Using Farmers and the local Government of Agriculture UPTD with the Planned of Behavior (TPB) Theoretical Method Approach for the application of a system that applies to countries with a high level of rice production (Thailand) applied to the existing agricultural system in Indonesia. to be adjusted. In DI Jatiluhur, East Tarum Main Canal, Subang Regency, it can be concluded as follows:

Table 6. Resume of WUA Analysis.

No	Variable	P3A Srijaya			P3A Gondang Jaya		
		ATB	SN	PBC	ATB	SN	PBC
1	Partial Continuum Line						
	Value	75.20%	73.20%	74.80%	67.00%	65.50%	67.00%
	Category	Good	Good	Good	Fairly Good	Fairly Good	Fairly Good
2	Simultaneous Continuous Line						
	Value	74.40%			66.33%		
	Category	Good			Passably		
3	Correlation Coefficient						
	Value	0.938	0.933	0.923	0.867	0.899	0.912
	Category	Very strong	Very strong	Very strong	Very strong	Very strong	Very strong
4	t test (Partial)						
	t Value	0.036	0.047	0.025	0.043	0.049	0.047
	Category	Significant	Significant	Significant	Significant	Significant	Significant
5	F Test (Simultaneous)						
	Value	0.000			0.000		
	Category	Significant			Significant		
6	Simultaneous Determination Coefficient						
	Value	0.000			0.000		
7	Partial Determination Coefficient						
	Value	32.42%	29.31%	31.74%	27.25%	34.66%	35.48%

a. The results of the identification of Planned of Behavior in the participation of farmers using water for WUA Srijaya and WUA Gondang Jaya farmers in terms of Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control aspects state that:

- a) The Attitude Toward Behavior factor in Srijaya WUA shows a score percentage of 75.20% categorized as "Good" and Gondang Jaya WUA shows a score percentage of 67.00% categorized as "Good enough".
- b) Subjective Norm factor in WUA Srijaya showed a score percentage of 73.20% categorized as "Good", and WUA Gondang Jaya showed a score percentage of 65.50% categorized as "Good enough".
- c) The Perceived Behavioral Control factor in Srijaya WUA shows a score percentage of 74.80% categorized as "Good" while Gondang Jaya WUA shows a score percentage of 67.00% categorized as "Good enough".

b. The results of the identification of the participation of farmers using water for WUA Srijaya and WUA Gondang Jaya farmers in terms of intention stated that the level of intention to carry out 5 (five) aspects that can affect the agricultural system in Indonesia in the WUA Gondang Jaya group is in the "good enough" category with the percentage score is 69.00% while for the WUA Srijaya group it is in the "good" category with a percentage score of 78.20%.

c. The results of the analysis of the relationship between the independent variables (Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control) on the dependent variable (intentions) are as follows:

- a) Based on the F (simultaneous) test at WUA Srijaya has a p-value (sig) of $0.000 \leq 0.05$, then H_0 is rejected so that the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have a significant influence on the intention variable. Based on the t-test (partial) the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have p-values (sig) of 0.036, 0.047 and 0.025, respectively, where the value is ≤ 0.05 ,

then H0 is rejected so that partially the Attitude variable Toward Behavior, Subjective Norm and Perceived Behavior Control have a significant influence on the intention variable.

- b) Based on the F (simultaneous) test at WUA Gondang Jaya has a p-value (sig) $0.000 \leq 0.05$, then H0 is rejected so that the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have a significant influence on the intention variable. Based on the t-test (partial) the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have p-values (sig) of 0.043, 0.049 and 0.047, respectively, where the value is ≤ 0.05 , then H0 is rejected so that partially the Attitude variable Toward Behavior, Subjective Norm and Perceived Behavior Control have a significant influence on the intention variable.

Table 7. Resume of UPTD Analysis.

No	Variable	Binong District			Tambakdahan District		
		ATB	SN	PBC	ATB	SN	PBC
1	Partial Continuum Line						
	Value	76.20%	76.50%	76.40%	70.70%	69.80%	71.50%
	Category	Good	Good	Good	Fairly Good	Fairly Good	Fairly Good
2	Simultaneous Continuous Line						
	Value	85.30%			71.70%		
	Category	Good			Passably		
3	Correlation Coefficient						
	Value	0.755	0.799	0.732	0.060	0.402	0.454
	Category	Strong	Strong	Strong	Medium	Medium	Medium
4	t test (Partial)						
	t Value	0.045	0.035	0.041	0.027	0.025	0.031
	Category	Significant	Significant	Significant	Significant	Significant	Significant
5	F Test (Simultaneous)						
	Value	0.000			0.000		
	Category	Significant			Significant		
6	Simultaneous Determination Coefficient						
	Value	91.3%			70.45%		
7	Partial Determination Coefficient						
	Value	27.60%	27.60%	27.40%	19.70%	16.50%	20.30%

d. The results of the analysis of the large influence between the independent variables (Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control) on the dependent variable (intentions) are as follows:

- a) The determination test at WUA Srijaya simultaneously the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have an influence of 93.8% on intention with a partial influence, namely Attitude Toward Behavior of 32.42%, Subjective Norm of 29.31% and Perceived Behavior Control of 31.74%.
- b) Determination test at WUA Gondangan Jaya simultaneously Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have an effect of 90.4% on intention with a partial influence, namely Attitude Toward Behavior of 27.25%, Subjective Norm of 34.66% and Perceived Behavior Control by 35.48%
- e. The results of the identification of Planned of Behavior in the participation of UPTD for employees at UPTD Agriculture, Binong District and UPTD Agriculture, Tambakdahan District in terms of Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control aspects state that:
- a) The Attitude Toward Behavior factor at the UPTD Agriculture in Binong District showed a score percentage of 76.20% categorized as "Good" and the Agricultural UPTD Tambakdahan District showed a score percentage of 70.70% categorized as "Good enough".

- b) The Subjective Norm factor at the Agricultural UPTD in Binong District showed a score percentage of 76.50% categorized as "Good", and the Agricultural UPTD Tambakdahan District showed a score percentage of 69.80% categorized as "Good enough".
- c) Factors Perceived Behavioral Control UPTD Agriculture Binong District shows a percentage score of 76.40% categorized as "Good" while UPTD Agriculture Tambakdahan District shows a percentage score of 71.50% categorized as "Good enough".
- f. The results of the identification of the participation of UPTD Agriculture on employees of UPTD Agriculture in Binong District, and UPTD Agriculture in Tambakdahan District in terms of the intention aspect stated that the level of intention to carry out 5 (five) aspects that could affect the agricultural system in Indonesia in the UPTD Agriculture group in Tambakdahan District was in the "enough" category. good" with a percentage score of 71.67% while for UPTD Agriculture, Binong District, it is in the "good" category with a percentage score of 85.30%
- g. The results of the analysis of the relationship between the independent variables (Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control) on the dependent variable (intentions) are as follows:
- a) Based on the F (simultaneous) test at the Agricultural UPTD, Binong District has a p-value (sig) of $0.000 \leq 0.05$, then H_0 is rejected so that the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have a significant influence on the intention variable. Based on the t-test (partial) the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have p-values (sig) of 0.045, 0.035 and 0.041, respectively, where the value is ≤ 0.05 , then H_0 is rejected so that partially the Attitude variable Toward Behavior, Subjective Norm and Perceived Behavior Control have a significant influence on the intention variable.
- b) Based on the F (simultaneous) test at the Agricultural UPTD, Tambakdahan District has a p-value (sig) of $0.000 \leq 0.05$, then H_0 is rejected so that the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have a significant influence on the intention variable. Based on the t-test (partial) the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have p-values (sig) of 0.027, 0.025 and 0.031 respectively, where the value is ≤ 0.05 , then H_0 is rejected so that partially the Attitude variable Toward Behavior, Subjective Norm and Perceived Behavior Control have a significant influence on the intention variable.
- h. The results of the analysis of the large influence between the independent variables (Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control) on the dependent variable (intentions) are as follows:
- a) Determination test at the Agricultural UPTD Binong District simultaneously the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have an influence of 91.3% on intention with a partial influence, namely Attitude Toward Behavior of 27.6%, Subjective Norm of 27.61% and Perceived Behavior Control by 27.4%.

Table 8. Resume of All WUA Analysis.

No	Variable	Intention	
		P3A Srijaya	P3A Gondang Jaya
1	Partial Continuum Line		
	Value	7829.00%	69.00%
	Category	Good	Fairly Good
2	Correlation Coefficient		
	Value	0.960	0.914
	Category	Very strong	Very strong
3	t test		
	t Value	0.000	0.000
	Category	Significant	Significant
4	Determination Coefficient		
	Value	92.1%	83.6%

- b) Determination test at the Agricultural UPTD, Tambakdahan District simultaneously, the Attitude Toward Behavior, Subjective Norm and Perceived Behavior Control variables have an influence

- of 70.45% on intention with a partial influence, namely Attitude Toward Behavior of 19.7%, Subjective Norm of 16.5% and Perceived Behavior Control by 20.3%
- i. The results of the analysis of the relationship between the independent variable (intentions) of farmers and the dependent variable (intentions) of the government are as follows:
- a) Based on WUA Srijaya on UPTD Agriculture Binong District t-test (partial) the Intention variable has a p-value (sig) of 0.000, where the value is ≤ 0.05 , then H_0 is rejected so partially the Intention variable has a significant effect. significant to the government's intention variable
 - b) Based on WUA Gondang Jaya on UPTD Agriculture, Tambakdahan District, the t-test (partial) of the Intention variable has a p-value (sig) of 0.000, where the value is ≤ 0.05 , then H_0 is rejected so that partially the Intention variable has a significant effect. significant to the government's intention variable

5. Recommendations

From these results, it is explained that there is indeed a significant influence related to the method given in the application of a good agricultural system in the irrigation area of SS Pawuletan CS, especially WUA Srijaya and WUA Godangjaya as well as the local government UPTD Agriculture, Binong and Tambakdahan sub-districts. Many factors influence both in terms of forming Intentions and Intentions related to the intention to follow the agricultural system which is felt to be able to improve the welfare of the local community.

Other usual supporting factors are also in the form of directives from the center and related agencies regarding the provision of general descriptions to follow the implementation of the agricultural system in each interest on 5 (five) main things that are considered as things that need to be improved, in terms of Subjective Norms are in the order of 3 for the local UPTD is seen in the partial determination coefficient and in WUA in the 2nd order. Norms subject is influenced by various factors, but the thing that really influences is the encouragement of habits around the work area and people who become role models. Then it was created from farmers and UPTD employees themselves who motivated themselves to implement an agricultural system that was focused on 5 (five) things that were highlighted, because it can be seen from the results of Attitude Toward Behavior which ranks 2nd out of 3 (three) variables for UPTD Agriculture and 3rd for WUA, as well as encouragement from farmers and UPTD workers to carry out these 5 (five) things because belief can be carried out as seen from Perceived Behavior Control which ranks 1st in UPTD and Farmers, then this variable is very influential.

As for the Intentions for Farmers, the intentions for the government are said to have a positive effect on mutual implementation of 5 (five) things that are said to improve the welfare of the farming community. Based on the results of interviews and adjusted to the research variables, the recommendations that can be given are as follows:

1. Attitudes towards behavior can be improved by giving firmness from related parties to farmers and UPTD employees who lack the motivation to carry out 5 (five) priorities related to changing agricultural systems that have a positive impact on farmers' welfare.
2. Social pressure (Subjective Norms) can be increased by discussing 5 (five) matters related to priorities for changing the agricultural system so that it can be implemented in line with both the government and local farmers.
3. Behavioral control (Perceived Behavioral Control) can be improved by conducting counseling or training by the relevant agencies together with experts who can later be used as resource persons to improve the abilities and insights of farmers and UPTD employees regarding 5 (five) matters related to priorities to change the agricultural system.
4. To increase the intention (intention) of farmers, there is an awareness that will open the minds of farmers to the importance of 5 (five) things related to priorities for changing the agricultural system, so it is necessary to provide guidance so that farmers can understand this as well as local UPTD employees.

6. Conclusion

The conclusion are as follows:

1. The results of the above analysis show that in WUA Srijaya the variable that has the dominant influence on intention is Attitude Toward Behavior, which is 32.42%, while WUA Gondang Jaya, the variable that has the dominant influence on intention is Perceived Behavioral Control, each of which is 35.48%. This shows that the intentions of the farmers in WUA Srijaya are more influenced by Attitude Toward Behavior, so that the farmers have a good positive attitude towards the choice to play a role in following the agricultural system which is focused on 5 (five) things. Meanwhile, Gondang Jaya's intention is more influenced by Perceived Behavioral Control.
2. The results of the above analysis show that in the UPTD of Binong District, the variables that have a dominant influence on intentions are Attitude Toward Behavior and Subject Norms, which are 27.6% and 27.6%, while the UPTD Tambakdahan Sub-district the variable that has a dominant influence on intentions is Perceived Behavioral Control each of 20.3%. This shows that the intentions of farmers in UPTD Binong District are more influenced by Attitude Toward Behavior, so that farmers have a good positive attitude towards the choice to play a role in following the agricultural system which is focused on 5 (five) things. Meanwhile, the intention of the UPTD in Tambakdahan District is more influenced by Perceived Behavioral Control.
3. Based on the table above, the results of the study indicate that, through the measurement of intention, the level of participation of farmers for the local government in the Gondang Jaya WUA group is in the "good enough" category with a percentage score of 69.0 while for the Srijaya WUA group it is in the "good" category. with a percentage score of 78.2%.

There are suggestions that researchers will put forward are:

1. Further research is expected to examine the progress of 5 (five) things that can improve the welfare of farmers by implementing them.
2. The government should try to make a program for agricultural development related to farmers who are active in implementing it.
3. The government and farmers in the future must cooperate more and distance themselves from each other's ego to be able to run the existing agricultural system.

7. References

- [1] Ministry of Agriculture Republic Indonesia, 2015, *Ministry of Agriculture Strategic Plan 2015-2019*
- [2] F B M Dabukke 2014 *Thailand, India And Japan Agricultural Development Policies And Their Implications For Indonesia*
- [3] Ajzen I 2006 *Constructing A TPB Questionnaire: Conceptual and Methodological Considerations, Occasional paper*
- [4] Palan 2008 *Competency management: techniques for implementing Competency-Based HR Management to Improve Organizational Competitiveness. Jakarta: PPM*
- [5] A Daryanto 2012 *Well Positioning Agricultural Development in the Perspective of National Development*
- [6] Nurhemi, et al 2014 *Food Security Level Of Poor Households In Flood Vulnerable Area*
- [7] T Widodo 2016 *Assessing The Socio-Cultural Changes Of Farming Communities Due To The Misconceptions Of Agricultural Development Modernization*
- [8] A Daryanto 2012 *Well Positioning Agricultural Development in the Perspective of National Development*
- [9] Dabukke F B M 2014 *Thailand, India And Japan Agricultural Development Policies And Their Implications For Indonesia*
- [10] A Amran S, et al 2017 *Agricultural Mechanism Revolution*
- [11] S Azwar 2010 *Human Attitude Theory and Its Measurement*
- [12] A Wiyono, et al. 2012 *Kajian Peran Serta Petani Terhadap Penyesuaian Manajemen Irigasi*

- untuk Usaha Tani Padi Metode SRI (System of Rice Intensification) di Petak Tersier Daerah Irigasi Cirasea, Kabupaten Bandung, Jawa Barat, Jurnal Teknik Sipil ITB, 19(1), 37-52*
- [13] Rismanto, et al. 2013. *Kajian Peran Serta Petani Dalam Operasi Dan Pemeliharaan Infrastruktur Jaringan Irigasi Dengan Pendekatan Theory of Planned Behaviour (Tpb) (Studi Kasus : Daerah Irigasi Cirasea Kabupaten Bandung, Jawa Barat)*, Jurnal Sositologi, 12(30), 502–525. <https://doi.org/10.5614/sostek.itbj.12.30.4>
- [14] Ajzen I & Fishbein M (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research, 129-385, Addison-Wesley, Reading, MA.*
- [15] Ajzen I 1985 *From Intentions to Actions: A Theory of Planned Behavior dalam J. Kuhl & J. Beckman, Eds., Action-control: From Cognition to Behavior, Springer, Heidelberg.*
- [16] Rismanto 2013
- [17] Ajzen I 2006 *Constructing A TPB Questionnaire: Conceptual and Methodological Considerations, Occasional paper.*
- [18] Dian A W 2017 *Application Of The Theory Of Planned Behavior In Generating Patients Intention To Undergo Cataract Surgery*
- [19] Sugiyono 2015 *Combination Research Methods (Mix Methods)*
- [20] Nasution 1991 *Naturalistic Research Methods*