

Self-Efficacy and Entrepreneurial Behavior of Horticultural Young Farmers in the Special Region of Yogyakarta Indonesia

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Abstract--- *The purpose of this study was to analyze the level of self-efficacy and entrepreneurial behavior and the effect of self-efficacy on entrepreneurial behavior. Data collection is done through a closed questionnaire with a quantitative approach. The research location was in the horticultural center in the Special Region of Yogyakarta, Indonesia. This research used simple random sampling method, which gathers data from 300 young horticultural farmer respondents. Data analysis was performed using linear regression analysis. The results of the study stated that self-efficacy has a positive effect on entrepreneurial behavior. The magnitude of the effect of self-efficacy on entrepreneurial behavior ($p \leq 0.01$) or R Square of 15.1%. The government is expected to further facilitate young farmers with the development of young farmers groups, training, apprenticeships, and business assistance so that they can increase their self-efficacy. Theoretical and practical implications of the findings are also discussed along with recommendations for improvement farmer regeneration program by the Ministry of Agriculture. environmental, planning, organizational, transportation, and traffic regulation.*

Keywords -- *Self-Efficacy, Entrepreneur Behavior, Young Farmer, Horticulture Commodities*

I. INTRODUCTION

The declining interest of young people to become farmers is a severe problem in agricultural development. The most fundamental question is why the youth are not interested in getting involved in agriculture. One hypothesis underlying the youth's lack of motivation for becoming farmers is that being a farmer does not promise a better life. The profession of farmers is not considered as prestigious for the younger generation because of the condition of farmers who tend to be poor [1]. Arvianti [2] also stated that low income was the main factor causing the decline in interest and motivation of rural youth to become farmers.

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The problem of farmers with narrow land and low income is a common condition that occurs in most parts of Asia and Africa [3], [4]. Most young people become farmers because of the inheritance of their parents [5]. These young farmers usually practice traditional agriculture and have low entrepreneurial abilities. They are unable to break through from the chains of poverty locking them in the condition at the first place. Thus, the cycle between poverty and low motivation to become farmer continues and hampers the farmers' regeneration process. Since it takes strong self-confidence to be able to overcome obstacles in the venture, then self-confidence and self-efficacy can play a role in the application of entrepreneurial behavior [6].

Self-efficacy is a psychological factor that is very influential in entrepreneurial behavior [7]. Self-efficacy can improve work behavior and influence entrepreneurial behavior [8]. This research defines self-efficacy as a belief in the ability of self in facing entrepreneurial challenges. In the case of the young farmers, by having a strong belief to overcome problems, the young farmers can overcome the severe challenges concerning developing their land in more entrepreneurial manners. If the young farmers are keen on developing horticultural entrepreneurship, they have to face challenges such as low selling prices, capital availability, climate, pests and diseases, and others. To overcome these challenges, young farmers need to apply entrepreneurial behavior so that they can regulate their businesses and gain profit from cultivating their lands. Entrepreneurial behavior includes the ability to find business opportunities, take advantage of business opportunities, develop businesses, and take advantage of new media for business. It is possible to develop entrepreneurial behavior through social learning processes. In this social learning process, young farmers need to have role models. The model can be individuals who are influential in the entrepreneurial process, which in turn can bring out the confidence in entrepreneurship.

This study seeks to analyze entrepreneurial behavior in young horticultural farmers who are influenced by self-efficacy in the process of social learning. The findings of this study are expected to provide input for the development of entrepreneurship among young farmers

II. LITERATURE REVIEW

Behavior is a habit of action, which shows a person's character consisting of patterns used by individuals in carrying out activities. Furthermore, behavior occurs because of the causes of stimulus, motivation for behavior, and purpose of behavior. Furthermore, outlining the formation of behavior can be done in three ways: by conditioning or habituation, understanding or insight, and using a model [9]: (a) The way of forming behavior with conditioning or habituation takes place by getting used to acting as expected then eventually the behavior will coalesce. (b) Formation of behavior with understanding (insight). The formation of behavior is attainable with understanding or insight. (c) Formation of behavior by using a model. Behavior formation is also achievable by using models or examples.

It is possible to develop entrepreneurial behavior by analyzing the process of forming behavior through modeling. The process is called social learning [10]. Bandura's Social Learning Theory is the development of behaviorism theory. Bandura considered someone not only responds to stimuli from the environment, but there are cognitive processes that cause someone to behave or respond to environmental conditions. Behavior arises because of self-efficacy. Bandura opined that self-assessment has a powerful influence on increasing motivation [11]. If someone has the confidence to be able to complete the task, then it will survive even though it is cumbersome and sometimes tiring. But if doubts are there, then what happens is not excited and gives up easily

Self-efficacy refers to one's self-evaluation of the belief in one's ability or competence to carry out tasks, achieve goals, or overcome obstacles [12]. According to [13], the results of a meta-analysis consistently show that self-efficacy significantly influences motivation and performance/behavior. Alwisol [14] added that self-efficacy is related to the belief that someone can take the desired action.

Furthermore, according to Bandura [10], [15], [13], self-efficacy can be obtained, changed, enhanced, or reduced through one or a combination of four sources: (1) Performance experience. Performance experience is the experience of achievement that has been achieved in the past. Performance experience is the most potent modifier of self-efficacy. Past achievements will increase self-efficacy, while failure will decrease self-efficacy. (2) Other people's experiences. If a person sees someone else capable of completing a task, then that person might develop the belief that he/she can do it, assuming that this person has an equal ability compared to the other person. (3) Social persuasion. Social persuasion is reinforcement from other people toward an individual that the individual can achieve what he/she wants. Individuals who receive social persuasion will have a higher degree of self-efficacy compared to individuals who do not obtain social persuasion. (4) Physical or emotional state. Physical conditions, such as weak body condition, and emotions such as fear, anxiety, and stress, can reduce self-efficacy. However, on the contrary, excellent physical condition and positive emotional enhancement can strengthen self-efficacy.

Self-efficacy is the result of the social learning process. Social learning will succeed if individuals can carry out the expected behavior. In the case of young farmers, they have strong peer association characteristics. The horticultural center area as a residence for young farmers is the closest environment in their activities and interactions. Cooperation and agricultural business activities are inseparable from their daily lives. As a vehicle for socializing with other young farmers, the group of young farmers is an organization that accommodates agricultural business activities.

High self-efficacy will result in the application of high entrepreneurial behavior. Self-efficacy is defined as self-confidence to be able to succeed in farming, which includes being confident of being able to face difficulties, confident of self-strength, and confident of being able to develop a business. According to Bandura [14], self-efficacy contains three essential elements: the level of difficulty of the task (magnitude), the strength of confidence (strong), and the broad scope of the field of behavior in which individuals are confident in their abilities (generality).

A thriving agricultural entrepreneur generally has high self-efficacy [16], [17], [18]. With high self-efficacy, the farmer will have optimism, which can help in overcoming problems such as climate and price uncertainty. This optimism will also help farmers from being discouraged if one day suffers losses because they believe they will later benefit. Roy [19], in his research, also found that farmers who have high self-efficacy tend to be able to face both climate and price challenges.

Shane and Venkataraman [20] argued that entrepreneurial behavior is the ability of farmers to find, identify, and utilize business opportunities by the concept of the entrepreneurial process. Furthermore, in developing youth farming, farmers can utilize information technology to support their entrepreneurial activities. According to FAO research [3], [21] young agricultural innovators in Africa, the Caribbean, and the Pacific, have made information technology a creative solution for increasing agricultural productivity. Although they still face many challenges, this can shorten the distribution and selling channels of agricultural products to developing countries.

The behavior of horticultural entrepreneurs is fascinating to discuss because horticultural agricultural products such as vegetables and fruits are increasingly in demand in line with the shift in consumption styles of the world

community. This condition makes horticultural agriculture a sector that has been widely developed in various countries, including in Indonesia, with the government's strategic policy on horticultural sector financing as stipulated in Government Regulation No. 109/2015.

III. RESEARCH METHOD

This research was located in the area of horticultural commodities in the Special Region of Yogyakarta, which includes three districts: Bantul, Kulonprogo, and Sleman. The study was done in January-July 2019. Horticulture commodities produced in the research location were chili, *salak* or snake fruit, and onion. The criteria for respondents in this study were: young farmers who are horticultural entrepreneurs with a range after 18-40 years and joined in a farmer group. The population of farmers meeting the criteria was 604. Sampling was done by simple random sampling technique. The number of samples taken was 300 people.

Data collection is done by a closed questionnaire. Research variables observed in this research included self-efficacy and entrepreneurial behavior. The self-efficacy variable included confidence in facing business difficulties, confidence with self ability, and confidence in being able to develop a business. The entrepreneurial behavior variable consists of identifying business opportunities, exploiting business opportunities, developing businesses, and utilizing new media for businesses. The self-efficacy variable was measured using a 5-score rating scale: (1) very not sure, (2) not sure, (3) doubtful, (4) sure, (5) very sure. entrepreneurial behavior variables are measured using a 5-score rating scale: (1) never, (2) rarely, (3) sometimes, (4) often, (5) always. To determine the effect of independent variables on the dependent variable using linear regression tests. The statistical model is as follows: $Y = k + aX$

Description:

Y: Entrepreneur behavior

K : Constant

X : Self- efficacy

IV. RESULTS AND DISCUSSION

4.1. Achievements of Self Efficacy and Horticultural Entrepreneur Behavior

Self-efficacy in agricultural entrepreneurship is defined as the self-confidence of young farmers in facing business difficulties, confidence in their abilities, and confidence in being able to develop a business. In detail, Table 1 shows the breakdown of variables comprising the self-efficacy of young farmers as the result of this research.

Table 1. Self-Efficacy of Young Farmers in Entrepreneurship

No	Indicator	Mean	SD
1.	Confidence able to deal with business difficulties	3,34	0,66
2.	Confidence in self ability	3,45	0,65
3.	Confidence able to develop a business	3,33	0,64

Source: Primary Data Analysis (2019)

Based on Table 1, among the variables constituting self-efficacy in this research, confidence in the ability of self shows the highest mean (3.45). Based on the findings during this research, the average length of entrepreneurship is 8.25 years. Thus, the young farmers have been engaged in entrepreneurship in horticulture for a long time, so they have a good experience and ability to do entrepreneurship. This condition affects their confidence in the ability of self, as shown by the comparatively high mean of the variable. The variable with the lowest value is

the ability to develop a business (3.33). Horticultural business development is not easy to do for farmers with a small land area. The average land ownership of young farmers is 0.5 ha. The extent of land that could produce a little harvest too. Farmers must try to find other income to meet their needs. Other than that, fluctuations in horticultural commodity prices are a classic problem that must be faced by farmers. Farmers have to sell their commodities often at low prices during the harvest season and, conversely, selling high during non-harvesting periods. Not to mention the problem of climate change that sometimes causes catastrophic floods and droughts, resulting in crop failure. These problems are affecting the young farmers, making them feeling unsure that they will produce crops in line with expectations. This finding is in line with Roy's study [19] that elaborated on the many factors causing low self-efficacy in farmers.

Furthermore, the level of self-efficacy will affect entrepreneurial behavior. Horticultural entrepreneurial behavior in this study is defined as the ability to identify business opportunities, take advantage of business opportunities, develop businesses, and utilize new media for business. Table 2 shows the mean results of each aspect of entrepreneurial behavior.

Table 2. Entrepreneurial Behavior of Young Farmers in Entrepreneurship

No	Indicator	Mean	SD
1.	Identification of Business Opportunities	3,48	0,56
2.	Utilizing Business Opportunities	3,05	0,68
3.	Developing Businesses	3,02	0,69
4.	Utilizing New Media for Business	3,02	0,72

Source: Primary Data Analysis (2019)

The entrepreneurial behavior variable has a mean value at an occasional level (sometimes). This result is consistent with research [4], [20], which stated that most farmers do not have an orientation toward entrepreneurial development and behavior. Farmers have not been able to take advantage of opportunities for market demand that continues to increase, which is one indicator of entrepreneurial behavior. Efforts to implement entrepreneurial behavior are still not optimal. They perform subsistence farming because they only continue their parents' business. The majority of young farmers in this study (89%) were children of farmers. This result is in line with the findings of [22] who stated that most farmers still have low entrepreneurial behavior or become subsistence farmers (oriented towards meeting family needs), not yet business-oriented. They perform the same farming strategy as the pattern that has been done by their parents and do not engage in innovative or creative actions.

The variable with the highest value is in the ability to identify business opportunities (3.48). The choice of horticultural commodities that have high economic value is a consideration for chili farmers in entrepreneurship. Farmers carry out intercropping strategy by planting vegetable commodities such as spinach, mustard greens, and shallots. They can harvest the vegetables while waiting 2.5-3 months after the seedlings have been planted. Plant age can reach 24 months, with a harvesting frequency of 15-18 times [23].

The variables with the lowest value are the ability to develop a business (3.02), and the ability to use new media for business (3.02). In business development, farmers prefer to use existing land and not extending their farmland, because of the limited available land. The use of new media has been done much because the market share is still small and requires more time to sell crops. The only innovation that is most effective today is selling chili through the auction market. This effort can improve the bargaining position and increase the price of chili commodities rather than being sold individually to intermediaries.

Chili farmers have innovated with the auction market, snake fruit farmers with agro-tourism development, while onion farmers have not yet developed farmers groups. New onion farmers develop personal sales to tourists on the beach around the farm location. Meanwhile, salak farmers utilize new media to support the development of agro-tourism. The group of young farmers combines the potential of agriculture with nature tourism. They do promotions using websites and other social media (Instagram, Facebook, WhatsApp).

4.2. The Effect of Self-Efficacy of Horticultural Entrepreneur Behavior

Table 3 shows the effect of self-efficacy on the behavior of agricultural entrepreneurs (R Square) 15.1%. This effect is significant because of the calculated F value (52.83) is higher than the F table (3.88) at a significance level of $p \leq 0.01$. Self-efficacy has a positive effect on the behavior of young horticultural farmer entrepreneurs. The equation can be stated as follows: $Y = 10,061 + 0,388X$. Self-efficacy has a significant effect on entrepreneur behavior (Table 3). Each increase in self-efficacy of 1 (one) point can increase entrepreneur behavior by 0,388 points.

Table 3. Effect of Self-Efficacy on Agricultural Entrepreneurial Behavior

Variable	Regression Coefficient	T value	Sign	Note
Self Efficacy	0,388	7,268	0,000	**
Constant		10,061	0,000	
R Square	0,151			
Adjusted R Square	0,148			
F Calculate	52,830			

Note: ** Significant at 1% level

Source: Primary Data Analysis (2019)

Self-efficacy has a significant positive effect on entrepreneurial behavior (Table 3). Self-efficacy is improvable by four things: self-experience, the experience of others, social persuasion, and emotional/physical state. Self-experience is affected by the length of entrepreneurship. The average young farmer has been in entrepreneurship for 8.25, a relatively long time being an agricultural entrepreneur, thus building their confidence over their abilities. The experiences of others can be learned through interactions in young farmers groups that enable social learning. Social persuasion is shown by the role of agricultural instructors in providing material and entrepreneurial assistance. The process of social learning in groups can increase self-efficacy that is influential in improving entrepreneurial behavior. Monthly meetings, activities to prepare the land, manage and maintain plants, to harvest, and sell are some activities that bring them together with each other in groups that can strengthen the self-efficacy of young farmers. The effect of self-efficacy in developing entrepreneurial behavior was also revealed in this study [16], [24],[25] .

V. CONCLUSION AND RECOMMENDATION

The novelty of this research is the significant influence of self-efficacy on entrepreneurial behavior. Efforts to improve self-efficacy are possible to perform by providing training and assistance, strengthening young farmers' groups, and increasing the role of extension workers. The implication of the findings of this study is the need for serious efforts by the government and other parties to jointly strengthen programs aimed at young farmers, assisting them in farming by increasing personal capacity and self-efficacy so that they apply entrepreneurial behavior in farming and become successful agripreneur. Future studies can analyze entrepreneurial behavior based on horticultural commodities, and deepen the role of groups as a means in the process of social learning.

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