

# EFFECT OF ENTREPRENEURSHIP CHARACTER ON RISK BEHAVIOR OF SEMI-ORGANIC RICE FARMING IN BANTUL REGENCY

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## Introduction

The development of organic rice farming at farmer level is not easy do be done since many farmers do not dare to take a risk, both production risk and price risk. The success of farmers to achieve farming performance are determined by the ability of farmers whether on their attitude, knowledge and skills which are actualized infarming. Farmer's entrepreneurship is one factor to determine the success of market-oriented enterprises especially in risk taking.

## Research Purposes

The purpose of this research is to know the effect of entrepreneurship character on risk behavior of semi-organic rice farming

## Originalitas & Contribution

Researches on farmers' behavior toward risk are numerous and varied, such as Torkamani and Rahmini (2001), Fariyanti (2008), Fauziah (2010), Saptana (2010) and Czekaj & Henningsen, (2013). These study followed Kumbhakar (2002) which was used parametric analysis model by including entrepreneurship character variable as independent variable. This model would produce two models of farmer behavior toward risk. Model I is farmer behavior toward production risk and model II is producer behavior against risk of price uncertainty.

This research is expected to give suggestions to the policy makers on conducting guidance for semi-organic rice farmers on the development of semi-organic rice farming and provide price assurance which could reduce the risk of production and price.

## Method

This research was conducted in Bantul Regency which is the center of organic rice development in Special Region of Yogyakarta where several groups of farmers who have got trust from government institution to manage organic rice farming and got organic certificate. The purposive sampling method was used in this research with the group of semi-organic rice farmer in Bantul Regency as sample. This research was conducted on semi-organic farmers in Bantul Regency consist of 123 respondents. The farmers behavior analysis on risk of semi-organic rice farming was analyzed using Kumbhakar and Tsionas (2002) method which was the development of Just and Pope (1978) model. This approach model used parametric regression method by 1) estimating the function of product.

## Result & Discussion

### 1. The Entrepreneurship Characteristics

Table 1. The Scores of Entrepreneurship Characteristics on the Semi-organic Rice Farmers

Indicators	Entrepreneurship Characteristics			
	Low		High	
	Scores	Average	Scores	Average
Motivation	3.48		4.02	
Innovation and Creativity	3.34	3.27	3.94	3.85
Risk Taking	2.90		3.56	
Decision-Making	3.37		3.88	

### 2. The Behavior Analysis of Farmers toward the Risks

#### a. The Analysis of Production Function.

Table 2. The Estimated Function Production of Semi-organic Rice Farming

Variables	Coefficient	t- test	Prob
Constant	3.9814	11.2329	0.0000
Area (ha)	0.4055**	5.0464	0.0000
Seed (kg)	0.3325**	4.1423	0.0001
Manure (kg)	0.3673**	6.8737	0.0000
Anorganic Fertilizer (Rp)	-0.0043*	-1.8722	0.0827
Labor (man day)	0.0051	0.1852	0.4634
Organic Pesticides (Rp)	-0.0014	-0.5556	0.5713
Fertilizer N (kg)	-0.0747*	-1.8929	0.0609
Entrepreneurship Score	0.0031**	3.4950	0.0008
R-square	0.8481		
F-statistic	260.6288**		

\* : level of significant 10%

\*\* : level of signifikan 5%

#### b. The Analysis of the Function Risk Production.

Table 3. The Estimated of the Production Risk Function of Semi-organic Rice

Variables	Coefficient	t-test	Prob.
Constant	3.8035	1.7107	0.0899
Area (ha)	0.6535*	1.8735	0.0754
Seed (kg)	-0.7775	-1.5383	0.1267
Manure (kg)	-0.4393*	-1.8951	0.0729
Anorganic Fertilizer (Rp)	0.0084	0.0708	0.9437
Labor (man day)	0.3271*	1.7215	0.0879
Organic Pesticides (Rp)	-0.0124	-0.7989	0.4260
Fertilizer N (kg)	0.4815*	1.7664	0.0800
Entrepreneurship	-0.0174**	-3.1146	0.0023
R-square	0.2512		
F-Statistic	4.7811**		

\* : level of significant 10%

\*\* : level of signifikan 5%

#### c. The Analysis of Farmers' Behavior toward the Risk.

##### c.1. The farmers' behavior toward the risk production

Table 4. The Farmers' Behavior toward the Risk Production of Semi-Organic Rice

Farmers' Behavior	Entrepreneurship Characteristic			
	Low		High	
	Number	Percentage	Number	Percentage
Risk Avers	40	70.18	46	69.70
Risk Neutral	3	5.26	2	3.03
Risk Lover	14	24.56	18	27.27
Total	57	100	66	100

##### c.2. The farmers' behavior toward the risk price

Table 5. The farmers' behavior toward the Risk Price of Semi-Organic Rice

Famers Behavior	Entrepreneurship Characteristics			
	Low		High	
	Number	Percentage	Number	Percentage
Risk Averse	36	63.16	42	63.64
Risk Neutral	4	7.02	4	6.06
Risk Taker	17	29.82	20	30.30
Total	57	100	66	100

## Conclusion

The entrepreneurship characteristics significantly influence the production function, production risk function, and behavior toward production risk as well as organic rice price.

Factors of production that showed positive and significant effect on organic rice production were land, seed, manure and entrepreneurial score. While PK fertilizer and Natrium fertilizer showed negative and significant effect on the function of organic rice production. The coefficient value of these factors production was in accordance with the expectations since in organic rice farming, the use of non-organic production factors should be reduced so that chemical residues could be minimized.

The result of risk function analysis showed that land, labor, and N fertilizer were the significant determinant factor of risk production of organic rice farming and categorize as risk increasing. While manure and entrepreneurship score showed as expected on the coefficient of regression which was risk decreasing.

Behavior of farmers against the risks of production of organic rice farming whether farmers with high or low entrepreneurial character showed that more than 70 percent farmers were risk averse. Moreover, the left of 25 percent of farmers who are risk lover, organic farmers with high entrepreneurial character were more risk lover than those with low entrepreneurial characteristics.

To the end, the behavior of farmers against the risk of organic rice prices, approximately 60% of farmers are risk averse. In term of production risks, organic rice farmers are more confident to face price risks, especially for high-entrepreneurial farmers.

