THE EFFECT OF MOTIVATION OF PADDY STRAW MUSHROOM (*Volvariella volvaceae)* FARMER IN INCREASING THE INCOME OF PADDY STRAW MUSHROOM INDUSTRY IN JEMBER

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Abstract

In Jember, paddy straw mushroom industry has reached in 17 region consisting 123 farmer. Mainly, it become a main occupation of farmer. So, it shows amount af farmers are motivated to cultivate paddy straw mushroom with many obstacles and opportunity to increase maximal income. Indicator of motivation itself is fulfillment of requirement, natural resouces, labour, the available of means production, the goverment attention, revenue, and market demand. The methodology of sampling is by using Cluster Sampling and Incidental Sampling. In methodology of data analysis, researcher uses PATH analysis and FFA analysis by using primer and secondary data. The result of research shows (1) effect of sosial factors to the motivation of paddy straw mushroom farmers affects the motivation. It is include the easy of cultivation factor, capital, available of means production, and market demand. Whereas, the effect of motivation to the income through production factor shows positive correlation to the significance of prodduction factor to the income. (2) The most dominant and effective factor is the easy of cultivation factor to increase the income of paddy straw mushroom industry should be carried out by farmer or government. (3) The main obstacle in paddy straw mushroom industry is H3 and H4 factor. The main opportunity of paddy straw mushroom industry is D2 dan D3 factor. (4) Strategy to increase the income of paddy straw mushroom industry in Jember is by giving the soft bureaucracy to gain investment credit through APJMJ, goverment or farmer associated in APJMJ should increase APJMJ member, and develop the available of means production by increasing provider unit in achievable place.

Keywords: *Paddy straw mushroom industry, motivation, PATH and FFA Analysis, income, and strategy.*

Introduction

The revenue of paddy straw mushroom (*Volvariella colvaceae*) in Jember is begin to be known in the early of 1980th which develop in Wuluhan subdistrict,but it is on the 17 subdidtricts in Jember now. The data collected from Jember (*Volvariella volvaceae*) Farmer Association (APJMJ) in 2009 shows that there are 123 paddy straw mushroom (*Volvariella volvaceae*) farmers in jember with the number of 30.750,8 Kg yield.

The number of paddy straw mushroom (*Volvariella volvaceae*) farmer in Jember is an indication of farmer's interest in farming. There are a lot of farmers today who lack of

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financial capital, facilities and infrastructure. The purpose of this research is to know how far the interest, willing, and encouragement to continuing maintain their farming with problem and opportunity face, and to know what factors are motivate farmer in increasing their farm income with the appropiate strategy in raising their paddy straw mushroom (*Volvariella volvaceae*) in Jember.

Problem to Discuss

1. How are the factors affect motivation and motivation affect to the farm income of paddy straw mushroom (*Volvariella volvaceae*) farming in Jember?
2. What factors are most dominan and effective for farmer in their aim in raising their paddy straw mushroom (*Volvariella volvaceae*) farmings?
3. How are problem and opportunity of farming in Jember?
4. What kind of strategy which is appropriate for raising their farm income of paddy straw mushroom (*Volvariella volvaceae*) in Jember?

Research Method

Determination of research area intentionally or called as method purposive. The methods used are descriptive method and coloration method. We take the sample by Cluster Sampling Method and Sampling Incidental method. Those use 65 people as a sample and also use secondary and primary data.

The first and second hypothesis are used as a Way of Analysis (Path Analysis). Before we analyze Path, the secondary data that using Likert's scale (the result of Likert's scale is data of ordinal) have to be altered or transformed into interval data (Soetriono, dkk. 2008).

The first problems will be tested with formulas (Solimun, in Soetriono, dkk, 2008):

a. The formula to know influence of existing factors to motivate:

$Zm = P1Z1 + P2Z2 + Pnzn + ei$

Explanation:

Zm = variable affect (motivation)

Z1,2,3,...N = variable have an effect on (factors)

P1,2 = coefficient of path direct influence

Ei = error

To test direct influence in every variable in farmer motivation can be made a model such as:

Zmotivation = P1Z1 + P2Z2 + P3Z3 + P4Z4 + P5Z5 + P6Z6 + P7Z7 + E1

Explanation:

Zmotivation = variable affect (motivation)

P1 = Direct technical exploration Influence to motivation

P2 = Direct Influence of capital to motivation

P3 = Direct Influence of labour in motivation

P4 = Direct Influence of saprodi availability to motivation

P5 = Direct Influence of government attention to motivation

P6 = Direct Influence of acceptance to motivation

P7 = Direct Influence of market request to motivation

Z1 = Technical Factor of exploration

Z2 = Capital Factor

Z3 = Factor of labour that be used

Z4 = availability factor of saprodi

Z5 = Factor attention of government

Z6 = Factor Acceptance

Z7 = Factor request of high market

E1 = Error

Hypothesis:

Ho = there is no signification or influence among technical factors of exploring mushroom, capital, LABOUR, availability of production facility, attention of government, amount of acceptance, and also the existence of market demand in farmers motivation who are trying to plant paddy straw mushroom (*Volvariella volvaceae*) (small round edible mushroom).

Ha = There are signification or there are influence among technical factors of paddy straw mushroom exploration, capital, labour, availability of production facility, existence of attention of government, amount of acceptance, and also the existence of market demand in farmers motivation who are trying to plant paddy straw mushroom.

b. To know influence of motivation in income of paddy straw mushroom (*Volvariella volvaceae*) farmers:

Zp = Zmp8 + E3

Or by using formula:

$Zp = Zmp9 + Zprp10 + E2 + E3$

Explanation:

Zm = Motivation Variable

Zp = Income Variable

Zpr = Production Variable

P8 = Direct Influence of motivation in income

P9 = Direct Influence of motivation in production

P10 = Direct Influence of production in income

E2,3 = error

Hypothesis

Ho = There are no influence among farmers and motivation in farming the paddy straw mushroom (*Volvariella volvaceae*) with income of farmers.

Ha = There are influence among farmers and motivation in farming the paddy straw mushroom (*Volvariella volvaceae*) with income of farmers

The Criteria of decision making (Riduwan and of Kuncoro, 2007):

1. If probability value 0.05 (α) is smaller or equal to probability value of Sig or (0.05 < Sig), it means Ha is refused and Ho is accepted, so, it is not significance
2. If probability value 0.05 (α) is bigger or equal to probability value of Sig or (0.05 ≥ Sig), it means Ha is accepted and Ho is refused, so it is significance

The second problem is analyzed by using calculation from every way that happen because of the technical factors of paddy straw mushroom (*Volvariella volvaceae*) farming, capital, labour, availability of production facility, existence of government attention, amount of income, and also the existence of market demand to motivation and farmer's income. In this calculation use Correlation value Between Factor (Rab).

The formulation of third and fourth problem are tested by using Strength analyzer tool or Force Field of Analysis (FFA). Formulation of fourth problem is determined with analyzing stimulus factors and obstacle factors in paddy straw mushroom (*Volvariella volvaceae*) farming which have been obtained from the result of FFA's analysis. According to Sianipar and Entang (2003), the most effective strategy is eliminating or disappearing the minimum of obstacle key and optimizing the mobilization or stimulus key for the performance that wants to reached.

Result and Discussion

The Influence of Social Factors Toward Motivation

Social factors which are infuence motivation in paddy straw mushroom farm are technical cultivation factor, capital, TK, the availability of saprodi (means production padi= infrastructure for rice production), goverment's attention, acceptance, and market demand. According to the result of the analysis we can know that Z1, Z2, Z4, and Z7 factors have real effect on motivation of paddy straw mushroom farmer in Jember Regency because its significance value is lower than 0,05 (0,05 ≥ sig). The magnitude of direct effect from social factors to motivation. The form of the equation:

Zm = P1Z1 + P2Z2 + P3Z3 + P4Z4 + P5Z5 + P6Z6 + P7Z7 + E1

Zm = 0,33Z1 + 0,57Z2 - 0,23Z3 + 0,31Z4 + 0,01Z5 - 0,36Z6 + 0,27Z7 + E

The Effect of Motivation to The Proceeds of Paddy Straw Mushroom Industry in Jember Regency

The effect of motivation on paddy straw mushroom farmer to the proceeds of the farmer can be seen from the magnitude of motivation direct effect to the proceeds and the direct effect of motivation to the product which is produced at 95% credibility level.

Table 3: Total Effect of Motivation Variable to The Production Income

Independent variable (standard)	Dependent Variable		Total Effect
	Production	Income	
Motivation	0,08	-	
Production	-	0,98	
Total Effect			1,06

The equation form of magnitude of the direct influence of motivational factors to the income is:

Zp = ZmP8 + E3

Zp = 0,05Zm + E

The equation of motivation effect to the income through production variable:

Zp = ZmP9 + ZprP10 + E2 + E3

Zp = 0,08Zm + 0,98Zpr + E

From the calculation using SPSS ver.14.0 we can get the significance of motivational variables to the income 0,688 (0,05 < sig), significance of motivational

variable to production is 0,549 (0,05 < sig), and the significance of production variable to the income is 60446E-48 (0,05 ≥ sig). From the significance value we can know that motivation variable does not take real effect to the income and production, whereas production variable takes real effect to the income.

The Most Dominant and Effective Factor to Take in Order to Increase The Income of Paddy Straw Mushroom Industry in Jember Regency.

The calculation of each lane according to path analysis model in figure1explaines about X1 path (3) which is technical path of cultivation 3 = technical cultivation → the availability of saprodi (means production padi= infrastructure for rice production) → motivation→ production → income or X1 (3) = X1 → X4 → X8 → X9 → Y is a path which is becoming major priority for farmer and goverment in their way to increase the income of paddy straw mushroom farm in Jember Regency. This path has the biggest value from the other path that is 0,01. This Path way passes through the indirect influence / correlation of technical culture to the availability of inputs production (R14). To make it clear, let's see figure 2.

The Obstacles and The Opportunities on Paddy Straw Mushroom Industry in Jember Regency

In running the mushroom farm, farmers have some problems and some business opportunities. Those problems have big infuence to the flow of paddy straw mushroom farm. At the same time, all the oportunities can help paddy straw mushroom industry running well.

Table 4. Incentive and Inhibiting Factor of Paddy Straw Mushroom Industry

No.	Incentive Factor	No	Inhibiting factor
	Strengths		*Weakness*
D1	Technical cultivation	H1	The elucidation has not run well
D2	The availability of inputs production	H2	weather and temperature change uncertainly
D3	Suitable area (Natural Resources) for cultivation	H3	A complicated credit bureaucracy (in a way to get loan venture capital)
	Opportunities		*Threath*
D4	Market widely open	H4	The price of paddy straw mushroom is hard to increase although demand rises.
D5	Production amount always be absorbed by the market /market demand	H5	Lack of coordination between farmers and lack of coordination between farmer and government
D6	Middleman / mediator helps marketing	H6	staple and equipment price increase

From some incentive and inhibiting factor we can find constraints factor and major opportunity using *Force Field Analysis*. The result from some key respondents /*expert* :

Table 5: The Result of Force Field Analysis

No.	BF	ND	NRK	NBD	NBK	TNB	FKK
D1	4,44	3,33	3,24	0,15	0,14	0,29	
D2	24,44	4,67	2,91	1,14	0,71	1,85	*
D3	22,22	3,00	2,42	0,67	0,54	1,21	*
D4	15,56	3,33	2,79	0,52	0,43	0,95	
D5	17,78	3,67	2,70	0,65	0,48	1,13	
D6	15,56	3,33	2,52	0,52	0,39	0,91	
H1	8,89	2,67	2,61	0,24	0,23	0,47	
H2	8,89	4,33	2,40	0,39	0,21	0,60	
H3	26,67	4,67	2,49	1,24	0,66	1,91	*
H4	26,67	3,33	3,00	0,89	0,80	1,69	*
H5	4,44	2,33	2,88	0,10	0,13	0,23	
H6	24,44	3,33	2,91	0,81	0,71	1,53	

Source: primary data which is processed, 2009

Explanation: ***) =** major obstacles and oportunities factor on paddy straw mushroom industry
in Jember Regency.

D2 is the major oportunities factor, the existance of production means around production place or around Jember Regency will help farmer in running production

activities. Menawhile if the production means are not available with either in production area then farmer will be reluctant to strive paddy straw mushroom. Means production can be obtained from agricultural waste like straw and bran and from traditional market.

D3 is second major sector which supports D2. Although means production are available with either or marketing aspect runs well but if the area or natural resources is not supported, there will not be a paddy straw mushroom cultivation activities. Jember regency is an area which has enough rainfall and light intensity with temperature range about 23º C - 32º C and it fits for cultivating paddy straw mushroom because paddy straw mushroom cultivation needs 28º C as the minimum temperature and 35º C as the maximum.

H3 is the major constraints. If the venture capital which farmer has is low then it will cause the humpered of production process it can also make production process stop. To solve those problems, most of the farmers borrow money on their relatives or other paddy straw mushroom farmer. Farmers never want to borrow money from bank because they think that the bureaucracy in bank is hard, they must have a bail to borrow money. Moreover the interest on bank loans is quite high.

H4 becomes the constraints factor because not all of paddy straw mushroom farmers in Jember regency are incorporated to APJMJ and there are some farmers who becomes middleman/ collectors and they only think about *profit oriented.* This condition will destroy the price of paddy straw mushroom in the market.

Strategy In a Way to Increase The Income of Paddy Straw Mushroom Industry in Jember Regency

A suitable strategy which fits to FFA analysis including the following:

1. Provide ease of bureaucracy in obtaining business credit.
2. APJMJ helps government and farmer who include in it is more active /invite other farmers to become members of APJM so that paddy straw mushroom farmer in Jember can be well coordinated.
3. To develop the fabric of the availability of means production by adding units or provider agency of means production in the area around the farmer it self.

Conclusion and Suggestion

Conclusion

1. a. The effect of social factor on paddy straw mushroom farmer in Jember regency which have real effect to motivation are technical cultivation, capital, the availability of means production , and market demand

   b. the effect of motivation on the income of paddy straw mushroom farm in Jember Regency directly shows a positif relation but not significant. In other word it does not give any real effect.meanwhile the influence of motivation through the income which is got from production factor shows a positif relation between production factor and the income.

2. The most dominant and effective factor to be taken by farmer or government in their way to increase the income of paddy straw mushroom farm in Jember regency are technical cultivation factor or X1 (3), from sosial factors to motivation then the income through production.
3. Constraints in paddy straw mushroom farm in Jember regency is a complicated bureaucracy to obtain credit of venture capital and the price of paddy straw mushroom which is hard to increase.the opportunity factor y are the avaiilability of means production and area (natural resources) which is good for paddy straw mushroom cultivation.
4. Strategy in the increasing of paddy straw mushroom farm income in Jember regency are:
   a. Strategy provides the ease of bureaucracy in obtaining business credit.
   b. APJMJ helps government and farmer who include in it is more active/invite other farmers to become members of APJM so that paddy straw mushroom farmer in Jember can be well coordinated
   c. To develop the fabric of the availability of means production by adding units or provider agency of means production in the area around the farmer itself.

Suggestion

1. The need for an active role of farmer for the increase of motivation and to facilitate the coordination between farmers and government and among farmers in paddy straw mushroom industry for example, the increase in bargaining coordination among farmer.
2. The need for guidance, counseling, provision of sufficient knowledge and information from Department of Agriculture and Foodstuffs as well as from APJM to farmer about

paddy straw mushroom cultivation problem, selling price, opportunity and market access in the process of marketing, and income increasing.

References

Riduwan and Kuncoro. 2007. *Cara Cepat Belajar Analisis Path.* Jakarta: Erlangga.

Soetriono, dkk. 2008. *Metode Kuantitatif Sosial Ekonomi*. Jember: Jurusan Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Jember.

Sianipar and Entang. 2003. *Teknik-Teknik Analisis Manajemen.* Jakarta: Lembaga Administrasi Negara.

Syafi'i, Imam, dkk. 2007. *Manajemen Agribisnis*. Jember: Jurusan Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Jember.

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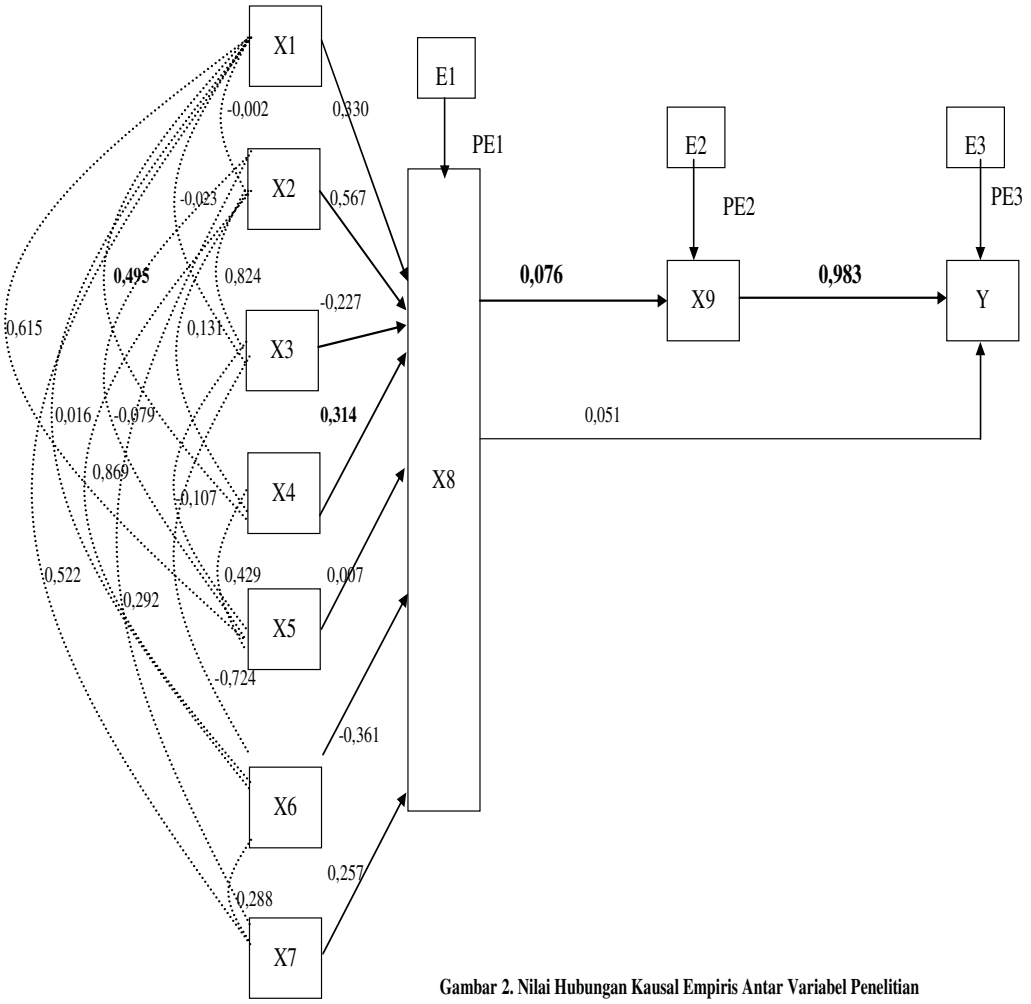

Gambar 2. Nilai Hubungan Kausal Empiris Antar Variabel Penelitian