

# Strategy for Increasing Production of Rice Commodity in East Halmahera Regency

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**Abstract:** *This research aimed to describe the condition and potential production of rice paddy commodities, to analyze the constraints of the factors of impediment and inhibiting and to formulate strategies to increase the production of paddy rice commodities in East Halmahera Regency. The method of analysis used is descriptive method and SWOT analysis. The results showed that the strategy of increasing production (b) increase the utilization of land resources maximally, (c) Improve the management of irrigation water well, (d) improve the function of gapoktan, (e) (f) increase farmers' efforts to reduce production costs, (f) increase training and extension to farmers in utilizing appropriate production technologies; (g) conduct field schools for farmers; (h) maximally improve irrigation water management throughout the rice fields; (i) reduce land use by giving capital to farmers (j) farmers should use adaptive varieties on climate, (k) government policy to suppress price fluctuations of paddy rice commodities*

**Keyword:** Driving and inhibiting factors, Increasing strategy, Paddy rice, Production

## 1. Introduction

Rice is called as a strategic political commodity, so the domestic rice production becomes a measure of food availability for Indonesia. It is therefore not surprising that Indonesian government intervention is enormous in efforts to increase production and price stability. This is because demand for rice continues to increase in line with the rate of population growth, then Indonesia must be able to be self-sustaining rice, so food security and food independence is not disturbed..

Spatial pattern data on Regional Spatial Plan (RTRW) of East Halmahera Regency 2010-2030 mentions the land area of 6,506.19 square kilometers land area which is intended as agricultural land area of 50.24 square kilometers. Agricultural land utilized 7.5% with the production in 2009 as many as 17,980 tons, so it is still wide open for the expansion of agricultural land, especially paddy fields.

However, based on statistical data from 2012 to 2016, paddy field production fluctuated with an average production of 11,647.5 tons of dry milled grain with an average harvest area of 2596 hectares, with an average productivity of only 4.5 tons per hectare, meaning it has not been able to reach 7 tons per hectare as the productivity of the cultivated varieties is cisantana. The available land area is 3,404 hectares, meaning that the area is not covered by an average of 808 hectares, and the management of paddy field is not optimal.

Provision of infrastructure and facilities to increase the production of paddy rice commodities which include the provision of irrigation networks, agricultural machinery tools, then the provision of seeds, fertilizers, pesticides. strengthening of human resources including provision of training management and marketing of production, post-harvest processing training, and cultivation training. strengthening of farmer institutions through the provision of

venture capital, market access facilities, and technical guidance is still far from the hope to increase rice production in East Halmahera Regency

According to Suparyono and Setyono (1993) fluctuations in rice production will have a wide impact on the system of community order that chooses rice as the staple food. According Prabandari (2013), that the area of land, labor, seeds, fertilizers, drugs and water have a very real effect on rice production. Fluctuation of paddy rice production in East Halmahera resulted in the weakness of farmers to utilize the economic potential that should be accepted to improve their welfare. By that it requires research as an effort to answer the above problems. That is "Strategy of Increasing Rice Production in East Halmahera Regency"

## 2. Review of Literature

### 2.1. Production

Production is something produced in the form of goods (goods) or services (services) within a period of time which subsequently counted as an added value for the company.

According to Murti Sumarti and Jhon Soeprihanto provide understanding of production is all activities in creating or adding usefulness of goods or services, where for these activities required factors of production. "(Sumiarti, Murti, 1987)

Sofyan Assauri, (2008) production is any activity in creating and adding utility of goods or services, for which activities are needed production factors in economics in the form of land, labor and skill (organization, managerial, and skills)

Ernoiz, (2012) suggests production theory is a theory that studies how to use a combination of input / production factors to produce the optimum output

## 2.2 Driving and inhibiting factors

Drivers in increasing the production of paddy field commodities are land. According to Sitorus (2004), land resources (land resources) is a physical environment consisting of climate, relief, soil, water and vegetation as well as objects on it as long as there is influence on land use. In this case the land also contains a sense of space or place. Land resource is a very important natural resource for human survival because it is needed in every human activity. The use of land resources, especially for agricultural activities is generally determined by the ability of land and land suitability

Inhibiting factors in increasing the production of rice paddy commodity that is:

### a) Human resources of farmers

According Hasibuan (2003) human resources is an integrated ability of the power and the physical power of the individual. Perpetrators and nature are done by heredity and environment, while her work performance is motivated by desire to fulfill her satisfaction.

### b) Seed

Seed according to RI Act No. 12 of 1992 seed is the result of generative or vegetative breeding that will be used to reproduce the plant or for farming

## 2.3. The concept of increasing production strategy.

### a) Internal factors

The internal environment consists of the variables (strengths and weaknesses) that exist within the organization but usually not in short-term control of top management. These variables are forms of atmosphere where work is done. These variables include organizational structure, culture, and resources (Hunger Wheelen, 2003).

Internal factors that affect the increase of rice commodity production i.e.

### 1) Human resources

Human resources (HRM) is one factor that is very important in a company in addition to other factors such as capital. Therefore, tbps should be well managed to improve the effectiveness and efficiency of the organization, as one of the functions within the company (Hariandja, 2002). Meanwhile, according to Martoyo (2002) human resources is the main supporting pillar as well as drive the organization in an effort to realize the vision and mission and goals

### 2) Institutional

The institutional set up of farmers is basically having several roles, namely: (a) the tasks within the organization (interorganizational task) to mediate society and state, (b) resource tasks include the monopolization of local resources (labor, capital, material, information) (c) service tasks may include service requests that describe the development objectives or coordination of local communities' requests, and (d) extra-organizational tasks require local demand for bureaucracy or outside organizations of society against interference by outside agents (Garkovich, 1989)

## 3) Management

According Simamora (1999) management (management) is the process of utilization of raw materials and human resources to achieve goals ditetapkan. Meanwhile, according to Couter (2004) management is the process of coordinating and integrating work activities to be completed efficiently and effectively with and through others.

## 4) Finance

Finance is the science and art of managing money that affects the lives of everyone and every organization. Finance deals with the processes, institutions, markets, and instruments involved in the transfer of money between individuals and between businesses and governments (Sundjaja and Barlian 2002)

## 2.4 Concept development

In essence development (development) is an effort to provide added value of what is owned to improve the quality of life. According to Zen. MT (2001) development is more of a motivation and knowledge than a wealth issue.

According Saefulhakim, et al (2002) region is a unity of geographical units that inter parts have functional linkages. Therefore, what is meant by regionalization is the geographical unit sequencing based on the proximity, resemblance, or intensity of functional relationships (help, help, protection) between parts of one another.

## 3. Research Methods

This research was conducted in Wasile District and East Wasile Sub-district of East Halmahera Regency from February to March 2018 with the number of informants as many as 16 people. Production improvement strategy in descriptive analysis, which is a research method that describes, describes the relationship between the phenomena studied with systematic, factual and accurate.

According to Arikunto (2002), that descriptive research is a study that explains, analyzes or describes the variables (conditions, circumstances or situations) both past and present are happening.

## 4. Results

Results Interviews and questionnaires to respondents were obtained by several factors IFE and EFE (Strengths, Weaknesses, Opportunities, and threats.

**Table 1:** Internal factor of increasing production of rice field commodities

Internal Factor	
Strength (S)	Weakness (W)
1. Adequate road access	1. Limited Farmer's Capital
2. Irrigation channels are quite adequate	2. Lack of labor of farmers
3. The location of the near market	3. Lack of utilization technology
4. Availability of land	
5. The existence of GAPOKTAN	

**Table 2:** External Factors Increasing Production of Rice Field Commodity in East Halmahera Regency

External Factor	
Opportunities (O)	Threats (T)
1. Very High Market Demand	1. The transfer of land is very high
2. The existence of business partners	2. Attack of plant-disturbing organisms
3. Availability of production technology	3. an uncertain climate
4. The existence of Agricultural Extension	4. Low access of farmers to capital sources
5. Strong government policy	5. Price fluctuations of paddy rice commodities

**Table 3:** Internal Factor Evaluation Matrix (IFE) Increased rice field commodity in East Halmahera Regency

Internal Factors	Value	Rating	Value x Rating
1	2	3	4
Strength (S)			
1) Adequate road access	0,12	3,37	0,40
2) Irrigation channels are quite adequate	0,12	3,12	0,37
3) The location of the near market	0,13	3,05	0,39
4) Availability of land	0,12	3,75	0,45
5) The existence of GAPOKTAN	0,12	3,43	0,41
Total strength	<b>0,62</b>		<b>2,02</b>
Weakness (W)			
1) Limited Farmer's Capital	0,13	2,62	0,34
2) Lack of labor of farmers	0,12	2,43	0,29
3) Lack of utilization technology	0,13	2,18	0,28
Total Weakness	<b>0,38</b>		<b>0,91</b>
Total	<b>1</b>		<b>2,93</b>

Source: Primary Data After Processed, 2018

The result of the analysis on the internal factors in the table above shows that the strength that is possessed in the increase of paddy rice commodity lies in the availability of land, whereas what is considered to be a weakness is limited farmer's capital. This is shown in a high rating level for strength and a low rating for weakness. However, in general the increase in rice commodities in East Halmahera Regency is in a strong Internal position, evidenced by a total score above the 2.50 level of 2.93

**Table 4:** External Factor Evaluation Matrix (EFE) Increased production of paddy rice commodities in East Halmahera

External Factors	Value	Rating	Value x Rating
1	2	3	4
Opportunities (O)			
1) Very High Market Demand	0,10	3,31	0,33
2) The existence of business partners	0,09	2,62	0,23
3) Availability of production technology	0,10	2,68	0,26
4) The existence of Agricultural Extension	0,10	2,87	0,28
5) Strong government policy	0,10	3,06	0,30
Total opportunities	0,49		1,4

Threats (T)			
1) The transfer of land is very high	0,11	3,06	0,33
2) Attack of plant disturbing organism	0,09	3,00	0,27
3) An uncertain climate	0,09	2,50	0,22
4) Low acces of farmers to capital sources	0,11	2,81	0,30
5) Price fluctuations of paddy rice commodities	0,11	2,31	0,25
Total threats	<b>0,51</b>		<b>1,37</b>
Total	<b>1</b>		<b>2,77</b>

Source: Primary Data After Processed, 2018

The result of the analysis to external factor in the table above shows that the opportunity factor in Increasing the production of paddy rice commodity in East Halmahera Kabuapten lies in the demand of market is very high, while the factor is considered to be a threat is the transfer of land function. It is indicated in the high rating level for opportunities and low ratings for threats. But in general the increase in production of paddy rice commodity in East Halmahera is strongly external because the total score is above 2.50 which is 2.77

## 5. Discussion

Based on the calculation of IFAS and EFAS matrices various alternative strategies can be formulated based on SWOT matrix analysis model. The advantage of this model is that it is easy to formulate a strategy based on a combination of internal factors and external factors. SWOT Matrix is one of the tools that can be used to develop four options, such as S-O strategy (Strength and Opportunity) is a strategy used by optimizing the strengths owned and exploit the various opportunities that exist, W-O strategy (Weakness and Opportunity) is a strategy that is used to mask the maximum of existing shortcomings by taking advantage of existing opportunities, the S-T (Strength and Threath) strategy is a strategy used by harnessing the power it has to deal with existing threats, and the W-T strategy (Weakness and Threat) is a strategy to minimize the disadvantages exist and avoid the existing threats

The key to the success of the SWOT matrix is to bring together internal and external key factors to form a strategy. SWOT Matrix is a systematic identification of various factors to formulate a strategy. This matrix is based on logic that maximizes strength and opportunities, while simultaneously can minimize weakness and threats. The alternative formulation of strategies against which successfully analyzed for increasing the production of rice commodities in East Halmahera Regency can be seen in the following table:

**Table 4:** SWOT Matrix increase production of paddy rice commodity in East Halmahera Regency.

Internal Analysis		Strengths (S)		Weakness (W)	
		1	2	1	2
External Analysis		1	Adequate road access	1	Limited Farmer's Capital
		2	Imigation channels are quite adequate	2	Lack of labor of famers
		3	The location of the near market	3	Lack ofutilization technology
		4	Availability of land		
		5	The existence of GAPOKTAN		
Opportunities (O)		Strengths – Opportunities (SO) Strategy		Weakness – Opportunities (WO) Strategy	
1	Very High Market Demand	1	Increased market access, information, and promotion (S1,S2,S3,S4,S5/O1,O2,O3,O4,O5)	1	Improve business partners to reduce production costs (W1,O2,O3,O4,O5)
2	The existence of business partners	2	Increased market access, information, and promotion Improving the utilization of paddy field resources to the maximum (S4,S5,O1,O3)	2	Improve training and extension to farmers in utilizing appropriate production technology. (W1.W2.W3.O1.O3.O4.O5)
3	Availability of production technology	3	Increasing good synergy between farmers, employers and government (S1,S2,S3,S4,S5O1,O2.O3.O4,O5)	3	Improve the utilization of production technology for farmers W1,W2,W3,O1,O2,O3,O4,O5)
4	The existence of Agricultural Extension	4	Improve good water management of imigation ( S2,S4,S5,O4,O5)	4	Field school was conducted for farmers (W3,O2,O3,O4,O5)
5	Strong government policy	5	Improving Gapoktan Function ( S5,O1,O2,O3,O4,O5)		
Threats (T)		Strengths – Threats (ST) Strategy		Weakness – Threats (WO) Strategy	
1	The transfer of land is very high	1	Improved management of irrigation water maximally to all area of paddy field (S1,S2,S4,S5,T3,T4)	1	Reduce land use by giving capital to farmers (W1,W3,T1,T2,T4)
2	Attack of plant-disturbing organisms			2	Farmers should use adaptive varieties on climate (W3,T3,T5)
3	an uncertain climate			3	Government policy to suppress price fluctuations (W2,W3,T5)
4	Low access of farmers to capital sources				

## 6. Conclusions

The result of factor factor analysis is the availability of land with the highest score 0,45.maka still very chance to increase production of rice commodity which previously only produce at 3.4 ton / ha. Improve market access, land use, maximal water management, business partner enhancement, technology utilization, and reduced land conversion.

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## Author Profile



**Muhammad Abdullah** was born in Maba, East Halmahera Rehency. North Maluku, Indonesia on May 13, 1974. He got his bachelor degree (S.P) in 2009 at faculty of Agriculture of Muhammadiyah University of Indonesia. From 2016 up to present, he continued his study to get his master degree on Agribusiness Study Program at post graduate Hasanuddin University, Makassar, Indonesia. This paper is part of his thesis which is supervised by Prof. Dr. Nurdin Brasit, SE., M.S. And Dr. Muh. Hatta Jamil, S.P., M.Si