DEMAND FOR CHEMICAL FERTILIZER OF THE TECHNICAL IRRIGATION PADDY IN EAST OGAN KOMERING ULU

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Abstract

This research investigates factors that influence demand for chemical fertilizer of the technical irrigation paddy in East Ogan Komering Ulu Regency. Using a multiple regression analysis, the result shows that the significant factors influencing the urea fertilizer demand are the price of urea fertilizer and the previous paddy production. It also finds that the price of paddy and total member of family do not significantly influence the fertilizer. Meanwhile the significant factors that influence the SP 18 fertilizer demand are the price of SP 18 fertilizer, the price of paddy and the previous paddy production.

Keywords: Urea fertilizer demand, SP 18 fertilizer demand, fertilizer subsidy
JEL classification numbers: O13, 018

INTRODUCTION

Chemical fertilizer is one of the important productive factors in the agricultural sector. For farmers, chemical fertilizer is one of the determinant elements that support the success of their rice production, so the price of the chemical fertilizer will implicitly influence the behaviour of the rice field farmers in using the fertilizer (Rahman, 2003). Furthermore, Prajogo et al. (2007) states that agriculture productivity and the farmers' income will be minimum and lower without using adequate fertilizer and other inputs like seed, water and labour. That is why the stock of fertilizer which is accompanied by variants, stock, location, time, price and quality must be guaranteed. The success story of green revolution that brought Indonesia to be rice self-sufficient in 1984 was also contributed by the improvement of fertilizer stock and any other agriculture policies. In paddy farming, fertilizer is one of the essential keys to expand their production and income. In certain condition, paddy farmers always try to buy the fertilizer although they must borrow money from farm intermediaries.

According to Alimoeso (2010), the supply of domestic fertilizer is influenced by production, import, export and stock. These are highly depended on the government policies, especially stock and export policies. Hadi et al. (1997) shows fertilizer production is significantly influenced by its production capacity and fertilizer domestic price. Besides that, the TSP fertilizer production is influenced by production or previous stock, the production capacity and the TSP domestic price. That is why the supply of domestic fertilizer will be essential to improve the development of agriculture sector.

Due to the farmers' dependence on chemical fertilizer and production then the impact of the government policy on chemical fertilizer should be accurately concerned. There have been many policies given by government on it. One of them is by reducing subsidy periodically. This policy influences the fertilizer economical performance which includes the production, the availability, the price and the usage level by the farmers (Adyana et al., 2000). On the other hand, according to Ellis (1992) the chemical subsidy has its certain disadvantages. One of them is that the bur-

den on state budget is unpredictable and it is often deviating from the social objectives, besides the source of inefficiency on farmers can happen.

The fertilizer subsidy had been given since the first Five-year Development Plan (REPELITA I) with an increasing number from year to year. The subsidy budget was burdened on State Budget (APBN). Then based on the Presidential Instruction Program (Inpres) No. 32 1998 the fertilizer subsidy was reduced periodically. The reason was the burden of the State Budget (APBN) was immense. Besides the reducing subsidy will make the national economy to be efficient so that the farmers will get used to work on the efficient price Furthermore the problem faced by the farmers is on the farmers' financial capability (Fitranita and Nawawi, 2002). The low of paddy productivity is also caused by the low use of productivity medium since they use very little fertilizer due to their limited budget. While from the price side the reducing subsidy periodically had caused the increasing retail price, for instance Urea fertilizer increased from 450 rupiahs/kg to 1.115 rupiahs/kg or 147% increase. SP-36 fertilizer was from 675 rupiahs/kg to 1.600 rupiahs/kg (137%), and ZA was up to 1.000 rupiahs/kg from 506 rupiahs/kg (Darmawan et al., 2000). Because of the low use of fertilizer by the farmers, it had the impact on the national rate of horticultural productivity. The paddy productivity rate in Indonesia is 4.4 ton/ha, Australia 9.5 ton/ha, Japan 6.65 ton/ha, and China 6.35 ton/ha.

As a whole, the wipe out of the fertilizer is a way to raise the efficiency and effectiveness of limited farmer budget. The increase of the fertilizer price as the reduction of the fertilizer subsidy was expected for farmers to use fertilizer efficiently (Darmawan et al. in Darwis and Nurmanaf, 2004). However the subsidy reduction is compensated by raising the price of unhulled paddy and paddy in order farmers to keep raising their paddy production.

Furthermore, Rahman (2003) states that the unhulled paddy and paddy floor price's policy is a policy packet set by the government to stimulate farmers to produce more rice. The determination of the unhulld paddies' floor price meets to the fe rtilizer retail price or vice versa. The purpose is to guarantee the deserve profits to raise the farmers' welfare by still considering the availability of the government's subsidy. The more efficient fertilizer used promises to the profits and furthermore it will raise the farmers' welfare (Soekartawi et al., 1984). This motivation is an important aspect to raise food commodity competition to the product market orientation which is more efficient (Hadi et al., 1997).

According to Darwis and Nurmanaf (2004), productive structure and chemical fertilizer market was relatively constant in the last decades. Industrial structure was not the basic determinant which influences the availability and price at the farmers' level. The fertilizer distribution system was dynamically improved based on the previous distribution policy performances. Distribution system was not only the determining fertilizer scarcity and price fluctuation. For farmers the factor influencing the fertilizers demand was suggestion for using the balance fertilizer and the farmers' income which has closed relationship with selling price of the unhulled paddy.

The government had planned fertilizer projection need until 2014. That need concerned to development of essential commodities like paddy, corn, bean and sugar. The government wants to improve these commodities production and to maintain rice and corn self-sufficiency (Alimoeso, 2010). To meet the target of production, the government should provide Urea, SP-36, ZA, KCI, NPK and Organic amounted for 35.6 billion ton, 22.1 billion ton, 6.3 billion ton, 13.1 billion ton, (45.9

billion ton and 62.2 billion ton, respectively from 2010-2014.

For that reason the farmer is encouraged to reduce fertilizer urea, KCL and SP. In other side, they are suggested to use compounded fertilizer like NPK, Organic and ZA. Yet, in fact, the farmers still depend on Urea and SP because of the availability and cheaper price.

Along with the policy for the gradually reduction of fertilizer subsidy, mass media often revealed that the policy has a very dominant impact to the farmers in which they could not buy the fertilizers so that their farming products decrease. There is an assumption that in South Sumatra especially at the central paddy producer like in East Ogan Komering Ulu Regency, the impact of the fertilizer subsidy reduction did not influence the farmers to buy fertilizers. It means that even though there is a fluctuated fertilizer prices, the farmers keep on buying the fertilizer (inelastic). However, the farmers probably had a certain strategy by buying in less number and lessening the dosage or even they try to use their spare time to look for other jobs to finance their farming. The other possibility is the farmers will combine the use of the organic and un-organic fertilizer. It happened because the soil had already very responsive to that fertilizing (Sumartono, 1984). Based on the analysis, this research aims to know the factors which influence the demand of chemical fertilizer on the technical irrigation paddy in the east OKU regency.

The East Ogan Komering Ulu Regency is the central paddy producer in South Sumatra with the paddy planting width in 2008 was about 112,437 ha for irrigated agricultural field and 2,224 ha for non irrigated agricultural field. Their farming were really depended on the fertilizing especially the chemical fertilizer like Urea and SP 18. Based on the empirical study by Mulyana (1998) it is of 14 regencies East Ogan Komering Ulu Regency is the productive paddy central which is relatively secured to meet the paddy consumption from its own products. While the other three productive central regencies and the other ten regencies/cities could not fulfil their paddy need periodically all along the year.

The demand for inputs in agriculture depends on a number of factors such as the price of the output, the price of the input, the price of other substituted or complementary inputs and the technical coefficients or parameters of the production function, particularly the elasticity for each input. Under a certain condition, the quality as well as the price of other inputs and the financial availability may affect the input demand function.

According to Debertin (1986), the demand for inputs to the agricultural is a derived demand. It is derived from the demand for output of the farm. For example, the demand by a farmer for seed, fertilizer, machinery, chemicals, and other inputs is derived from the demand for the corn produced by the farmers. The demand for each input is a function not only of their respective prices, but also the price of corn in the marketplace. The demand by a dairy farmer for grain and forage is dependent not only on the respective prices of grain and forage but also on the price of the milk being produced.

Furthermore, according to Sudayat (2009), the demand for the input is the derived demand because the inputs will be used in producing an output. The aspects concerned from the input demand are interdependence among the inputs and how producers try to maximize the profits by determining the optimal combination of inputs.

The degree of demand responsiveness with respect to factors influencing is expressed by its elasticity. The elasticity of demand is defined as the percentage change in quantity of a good divided by the percentage change in the price of that good. In general, any elasticity can be expressed as

the derivative of the logarithm of one variable with respect to the derivative logarithm of the other variables. Parallel to the elasticity of demand, the own price elasticity of demand for an input is defined as the percentage change in the price of other input divided by the percentage change in the price of given input. If there is more than one input to the production process then both own price and cross price elasticity can be defined. The own price elasticity is the same as the single input case, the percentage change in the quantity of the input divided by the percentage change in the price of that input. Meanwhile the cross price elasticity is defined as the percentage change in the quantity of input divided by the percentage change in the price of other input.

Fertilizer demand of farmers is influenced by ten factors (Parthsaraty, 1994). The factors are higher profit expected from using fertilizer, the farmers ability for buying the fertilizer, the fertilizer stock, raindrops and the distribution influencing the water stock and the using of fertilizer, irrigation land influencing the plant intensity, plant cropping, the stock and best variety of seed that is responsive to the fertilizer, the soil characteristic and nutrition, the total land area, and total land area per farmer, in fact that the fertilizer using is different between the little and big area.

Many studies on the fertilizer demand have been conducted such as Prayogo et al., (2007), Rachbini (2006), Sugianto (1982), Hadi (1990), Suryana et al., (1982a), Suryana et al., (1982b) and Sudaryanto et al., (1982). Meanwhile the researches on the pricing and subsidy policy of fertilizer are conducted by Nataatmadja et al. (1984), Santoso and Ariani (1990), Adnyana et al. (2000). Nurmanaf et al. (2003) investigates the system of fertilizer and seed distribution.

From others research, there were two approaches, namely econometric quantitative approach and descriptive approach. In the quantitative approach it has primal and dual approach. On the first approach, the fertilizer demand function estimation is not the objective. The researches using this approach are Suryana et al. (1982a, 1982b), Sudaryanto et al. (1982) and Santoso (1990). The researches using the dual approach are Sugianto (1982), Soekartawi (1984), Hadi (1990), and Rachbini (2006). In addition, researches using the primal approach are Nataatmaja (1984), Santoso et al., (1992), Rachmat et al., (1993) and Adnyana et al., (2000). On the other hand Asahari et al., (1995) and Hadi et al., (1997) use the descriptive approach.

From the quantitative model, it is only Santoso and Ariani (1990) using the trans log type and the others use the Cobb-Douglas type. In terms of data used, it is only Nataatmaja et al., (1984), Adnyana et al., (2000) and Rachbini (2006) that use the time series data and others use the cross sectional data. The estimation of the dual approach is the simultaneous regression with SUR (Seemingly Unrelated Regression) method, meanwhile on primal approach is regression with the ordinary least square method (OLS).

Alimoeso (2010) states that the supply of domestic fertilizer is influenced by production, import, export and stock. These are all depended on the government policies especially stock and export policies. Meanwhile Hadi et al., (1997), shows that fertilizer production is significantly influenced by the production capacity and fertilizer domestic price. In addition the TSP fertilizer production is influenced by production or previous stock, the production capacity and the TSP domestic price. That is why the supply of domestic fertilizer will be essential to improve the development of agriculture sector.

Table 1: The Production, Domestic Selling, Export and the Stock of Urea Fertilizer in 2002-2006 (ton)

Description	2002	2003	2004	2005	2006
1. Farmer Stock	140, 975	1,083,504	871,376	1,066,070	749,958
2. Production	6,006,221	5,425,520	5,667,415	5,848,655	5,654,692
3. Domestic Selling	4,240,967	4,690,856	5,007,354	5,416,294	5,495,877
- Agriculture Sector	3,845,765	4,233,856	3,789,556	4,159,396	4,409,818
- Industrial Sector	395,202	457,000	1,217,798	1,256,898	1,086,059
4. Export	822,725	946,792	465,367	748,473	0
5. Import	0	0	0	0	0
6. Final stock	1,083,504	871,376	1,066,070	749,958	908,773

Source: Statistics of East OKU Regency, 2009.

Table 2: The Demand for ZA, SP 36, Urea and NPK Subsidy in 2007

Sub Sector	Urea (ton)	SP 36 (ton)	ZA (ton)	NPK (ton)
Food Cropping	2,795,000	461,367	297,870	445,585
Horticulture	396,326	39,173	121,475	62,809
Harvest area	948,745	240,925	278,993	191,605
Livestock	12,699	1,079	1,661	0
Fishery	147,231	57,456	0	0
Stock	200,000	0	0	0
Total	4,500,000	800,000	700,000	700,000

Source: Statistics of East OKU Regency, 2009.

It is important to know the composition to make sure the availability of fertilizer for the farmers. Beside used in agriculture, the fertilizers are also used in food-cropping, horticulture, small plantation, livestock, fishery and industrial sector. It is also possible to be exported at the significant number. A large number of fertilizer stocks, in the beginning and the end of the year, can also indicate that the national stock of fertilizer is sufficient enough. So the minimum stock of urea fertilizer in the economy should not occur. The system of distribution then should be improved. The development of domestic fertilizer selling, export and the stock during the last 5 years (2002-2006) in East Ogan Komering Ulu Regency is presented in Table 1.

Meanwhile the demand for Urea, ZA, SP 36 and NPK along 2007 in East OKU is shown in Table 2. The demand for urea fertilizer was the largest especially for food cropping about 2.795.000 ton, followed by SP 36 amounted for 461.367 ton. NPK and ZA fertilizer were the third and fourth largest demand, respectively. The demand for all these fertilizers grew along the time, especially in 2007 where food cropping, harvest area and horticulture were most growing agriculture thus it needed more fertilizer.

METHODS

The location of research is in East Ogan Komering Ulu Regency of South Sumatera. The research was done in July 2009 until November 2009. The sampling method was multistage purposive sampling that is used for choosing the sub-regency, villages, and farmers from each four sub-regency namely Buay Madang, Semendawai Suku III, East Buay Madang, and Madang Suku I. The four sub-regencies are rice centre in East OKU regency. The data is primary data and secondary data. The primary data was taken trough observation and direct interview to rice farmers by using questionnaires. Every sub-regency is chosen two the largest villages as the sample, thus the total sample are 8 villages each 30 farmers. The total samples are 240 farmers.

Data obtained from the field of research was calculated by using tabulation and estimated using regression model as followed:

$$PU = \beta_0 + \beta_1 HPU + \beta_2 HPD + \beta_3 PDS + \beta_4 JK + \mu, \quad (35)$$

$$PS = \beta_0 + \beta_1 HS + \beta_2 HPD + \beta_3 PDS + \beta_4 JK + \mu, \quad (36)$$

where
PU is demand of urea (Kg/ha),
HPU is price of urea fertilizer (Rp/kg/th),
HPD is price of paddy (Rp/kg),
PDS is previous paddy production (kg/ha),
JK is the total member of family (person),
PS is demand of SP.18 fertlizer (Kg/ha),
HS is price of SP.18 fertilizer (Rp.kg/th),
μ is error terms.

RESULTS DISCUSSION

The East Ogan Komering Ulu regency situated at about 103^0 40' east longitude and 3^0 45' 4^0 55' south latitude. The East Ogan Komering Ulu topography is about 35-67 m above the sea level. Most of the people in East Ogan Komering Ulu regency use the land for non irrigated and local plantation (Table 3).

The first position for harvest area is rice field, it is almost 32% of total area with the harvest area is about 105.407 Ha. Then it is followed by plantation about 96.412 Ha or 27% of the total and the third is forestry which is almost 26% or 87.074 Ha of the total area. As other tropical islands in Indonesia, generally East Ogan Komering Ulu has tropical climate and tend to be dry with variant daily temperature between 22^0C – 31^0C. The mobility of people and distribution is relatively high in East OKU regency. This is due to East OKU is on the Trans Sumatera highway which connect the inter islands in Sumatera Island.

There are 240 sampling farmers in this research ranging from 25-65 years old and typically they have 8 members in the family. The formal education of the sample is elementary school that is about 58.66 percent, while junior high school graduate is 28.66 percent and 13.33 percent is senior high school graduate. On average they have been farming for 26.7 years. The land status is that 13.33 percent is rental with no profit sharing, 86.67 percent of the total area is owned by the sampling farmers. Most of the farmers in East OKU get the seeds from the government or their own seeds from their previous plants. The seeds are Ciliwung variety paddy and IR 46.

The fertilizers given are the organic and unorganic. The organic ones is the green manure. This is done by the farmers using the manure cattle. They can use their own cattle or they buy it from the others farmer who have the cattle. The unorganic fertilizers used are urea and SP-18. They buy the fertilizers from the agricultural shop at the capital city of the district in East OKU Regency. The average prices of each fertilizer are Rp. 1200 and Rp. 2.500 for Urea and SP-18, respectively. The farmers in East OKU regency rarely use the NPK fertilizer for their plant because of the high cost and limitation of supply in this region.

Table 3: Percentage of Harvest Area of Farm in East Ogan Komering Ulu, 2009

No	Types of farm enterprise	Harvest area (Ha)	Percentage (%)
1	Rice field	105,407	32
2	Dried land	36,798	11
3	Forestry	87,074	26
4	Plantation	96,412	27
5	Pond	11,200	3
6	River	109	1
	Total	337,000	100

Source: Statistics of East OKU Regency, 2009.

The regression of demand for urea fertilizer (PU) of the technical irrigation paddy farmer on the price of urea fertilizer (HPU), the price of paddy (HPD), previous paddy production (PDS), and the total member of family (JK) is presented as follow:

$$PU = -10{,}202 + 0{,}0007743\,HPU \quad (-10{,}259)^{**} \quad - 0{,}00967\,HPD + 0{,}0268\,PDS \quad (-0{,}160)^{tn} \quad (1{,}883)^{*} \quad - 0{,}229\,JK, \quad (-0{,}123)^{tn}$$

$$R^2 = 0{,}817,$$

$$F_{stat} = 27.877.$$

Notes: (1) Entries in parentheses are the corresponding $t_{statistic}$. (2) Entries in * and ** are significant at 10% and 5%, respectively. (3) Entries in *tn* is not significant.

The regression result suggests that the price of urea fertilizer (*HPU*) and the previous paddy production (*PDS*) are statistically significant in influencing the demand for urea fertilizer at 1% and 10% significance level, respectively. The coefficient regression of the price of urea fertilizer is 0.000743. It means that 1% increase the price of urea fertilizer will increase the demand up to 0.0743%. It stresses that urea fertilizer is very important for farmers. Even though the price increases, they still need more fertilizer to avoid the fall of their paddy production. The previous paddy production is also significant in influencing the demand for urea fertilizer at 10% significance level. The coefficient of regression 0.02685 which means that increase 1% previous paddy production will increase the demand for urea fertilizer by 2.685%. They expect higher production than the previous by using more urea fertilizer.

Meanwhile, the coefficient regression of the paddy price is -0.00967 which is not statistically significant in influencing urea demand. This negative correlation suggests that increase in the price of paddy increase will be followed by the increasing of the other goods which in turn will reduce the farmers' purchasing power. The variable of family members is also not statistically significant to affect demand for urea fertilizer in which the coefficient is -0,229. It could be understood by increasing the total member of family thus the family income would be divided to more people which in turn reduce the consumption for urea fertilizer.

The estimation result shows that coefficient of determination (R^2) is 0.817 or 81.7%. It means that 81.7% variation of urea's fertilizer demand can be explained by the price of urea fertilizer (*HPU*), the price of paddy (*HPD*), the previous production of paddy (*PDS*), the total member of family (*JK*), while the rest (18.3%) is explained by the other variables that is not included in this equation. The $F_{statistic}$ is 27,877 which explain that the price of urea fertilizer (*HPU*), price of paddy (*HPU*), the previous paddy production (*PDS*), and the total member of family (*JK*) jointly influence the demand for urea fertilizer at 1% level of significance. In other words, the model is good enough to explain the behavior of technical irrigation paddy farmers.

The second analysis is the factors influencing demand for SP 18 fertilizer. The regression of demand for SP 18 fertilizer by paddy field farmer on the price of SP.18 fertilizer (*HS*), price of paddy (*HPD*), the previous paddy production (*PDS*), and the total member of family (*JK*) is presented as follow

$$Y = 453{,}510 + 0{,}0003227HS - 0{,}110HPD \quad t \quad (5{,}565)^{***} \quad (-1{,}941)^{**} \quad + 022022PDS - 2{,}804JK, \quad (1{,}553)^{**} \quad (-1{,}407)^{tn}$$

$$R^2 = 0{,}703,$$

$$F_{stat} = 14{,}785.$$

Notes: (1) Entries in ** and *** are significant at 10% and 5%, respectively.

The price of SP18 fertilizer (*HS*) significantly influences the demand for the fertilizer at 1% level. The coefficient of the variable is 0.0003227 which explains 1% increase in the price of SP18 fertilizer will raise the demand of SP18 fertilizer by 0.032227%. The price of paddy also significantly affects demand for the fertilizer at 10% significance level. The coefficient is – 0,00010 which suggests 1% price increase of paddy will reduce 0.11% SP18 fertilizer demand. This result is consistent with the result of demand for urea fertilizer. Meanwhile the demand for SP18 fertilizer is also statistically influenced the previous paddy production at 10% level of significance. The coefficient is 0,022 which explain 1% increase in the previous paddy production will have a 2,022% increase in demand for SP 18 fertilizer. On the other hand, the total member of family is not statistically significant in influencing the SP.18 fertilizer demand.

The coefficient determination (R^2) is 0.703 or 70.3%. It means that 70.3% variation of SP18 fertilizer demand can be explained by all independent variables, the price of SP 18 fertilizer (*HS*), price of paddy (*HPD*), the previous paddy production (*PDS*), and the total member of family (*JK*), while the rest (29.7%) is explained by variable that is not included in this equation. To examine the relationship between all independent variables to the dependent variable is used statistic *F*. The value is 14,785 which is statistically significant at 1% level. It suggests that all independent variables are jointly significant in influencing the model of SP18 fertilizer demand by paddy field farmers.

The Farmer Behaviour in Using Fertilizer

The descriptive analysis of farmers' behaviour in using fertilizer is used to support econometric quantitative analysis. The purpose of this analysis is to know the factors for farmers to decide in using urea fertilizer or SP-18 fertilizer. The factors are stock availability, PPL recommendation, fluctuation of fertilizer price, output production, other costs than fertilizer, household consumption cost, information from other farmers, fertilizer deposit, the custom from their parents, and fertilizer subsidy from the government.

Based on the Table 4 the farmers behaviour in using fertilizer in East OKU regency is mostly influence by the output of production, stock availability, deposit availability, the custom from their parents, respectively. From the information above, it can be inferred that the fertilizer is very important to raise their field production.

Table 4: Some Factors for the Farmer to Decide in Using Fertilizer for Paddy at East OKU Regency in 2009

No	Factors	Amount (kg)	%
1.	Available Stock	60	14.70
2.	PPL Recommendation	20	4.91
3.	Fluctuation of fertilizer price	30	7.37
4.	The influence of production	80	19.66
5.	Other costs than fertilizer	22	5.40
6.	Household consumption cost	38	9.33
7.	Information from other farmers	18	4.42
8.	Available deposit	58	14.25
9	The custom from their parents	41	10.10
10	Subsidy from the government	40	9.83
	Total	407	100

Source: Statistics of East OKU Regency, 2009.

This result is same as regression result of Urea and SP-18 fertilizer demand. It also can be seen that rice farmers still expect much government policy on fertilizer deposit and subsidy. According to Alimoeso (2010) fertilizer subsidy has positive influence to the agriculture production and thus farmers' income. Fertilizer subsides will increase use of urea fertilizer by farmers. Fertilizer use of small-scale farmers have less sensitive with the change of fertilizer price while for the larger-scale farmers have a positive impact toward paddy productivity increase. A 1% increase of using urea fertilizer it could improve paddy production by 0,31 – 0,49% in Java and 0,15% outside Java. The fertilizer subsides have positive effect on large-scale farms productivity than those of the smaller-scale ones.

From the research of Bogor Agriculture Institute in Alimoeso (2010) it is shown that contribution of fertilizer subsidy in the national income was less than subsidy cost. Moreover the value of paddy production in 2008 was also less than fertilizer subsidy. That is why it need to make correction toward government policy since larger-scale farmers got more benefit from fertilizer subsidy than that of the little one. The large-scale farmers which are amount about 40% got 60% benefits from the total of fertilizer subsidy. While the paddy farmers in East OKU Regency are mostly small farm having 0.25 hectare to 1 hectare.

CONCLUSION

Based on the result and discussion it can be concluded that demand for urea fertilizer in East OKU is significantly influenced by the price of urea fertilizer (HPU) and previous paddy production (HDP), meanwhile the total members of family (JK) do not really influence (not significance). While the factors that influences towards SP 18 fertilizer demand in east OKU regency are the price of SP 18 fertilizer (HS), the price of paddy (HPD) and previous paddy production (PDS). Meanwhile the total members of family do not really influence (not significance). In addition, government intensively promote the use of compound fertilizer or even organic fertilizer instead of urea and SP18 to anticipate the negative impact of government subsidy reduction in urea and SP18 fertilizer.

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