EFFECTIVENESS OF AUCTION MARKETS COMMODITIES RED PEPPER (*Capsicum annum* L.)

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ABSTRACT

This research was conducted at the auction market of Siborongborong District, North Tapanuli Regency of North Sumatera Province. The purpose of this research are to know the mechanism in the auction market of red pepper, the effectiveness level in the auction market and the influence of price feasibility and then social relations, farmer's attitude, performance of administrators toward the effectiveness in auction market of red pepper. The sample was consists of farmers who were in the auction market. Determination of the sample was determined accidentially or who happenned to be in the location by interviewing the farmer directly with the number of samples that used 30 samples. Model of analysis that the data used was descriptive analysis, method of rating scale and multiple linear regression. The result of this study showed that the distribution of effectiveness in the auction market of 90%. For simultaneous test or F test stated from the whole variable has a real impact. Based on t test with a level of 95% eligibility prices, farmers attitudes and performance management significantly influence the effectiveness of the auction market while social relationships did not influence significantly the effectiveness of the auction market.

keyword: Effectiveness, Auction Market, Red Pepper

A. INTRODUCTION

Red pepper (Capcicum annum L.) is one of horticulture crops that have high economic value, can provide employment and improve living standards for farmers. In addition to the red pepper has a good market in the country (local market and the parent Jakarta) as well as for foreign markets (exports). Each year, Indonesia exported an average of 4000-5000 pepper ton (Hadiyanto, 2005).

Red pepper is also one of the agricultural products are vulnerable to price fluctuations. Prices can soar, but it also turned very low. The game prices by middlemen (collectors) to be a very harmful red pepper farmers in land sand. One solution to suppress the drop in the price of red pepper that is the presence of institutional auction market Anugrah, 2004).

In the auction market will be met directly the seller (growers) to the buyer. This will lead to the creation of transparent pricing, shortening the marketing channels; encourage quality improvement and production, which in turn can increase the income of farmers so as to improve the welfare of farmers (Devi et al, 2015).

Actual auction market is a regulated market for the balance of knowledge between actors, reducing the likelihood of under value on a particular item and able to create open pricing mechanism. Thus, the auction market is basically aimed to create price transparancy through the mechanism of direct bargaining between seller and buyer (Hartono, 1996).

Siborongborong is one of the District of North Tapanuli have land fairly broad sand beach and is suitable for the cultivation of red pepper, precisely around Siborongborong. Most of the population in coastal areas Siborongborong District of subsistence farmers whose livelihood through agriculture one red pepper in farming.

Most farmers in the district and regional levels Siborongborong North Tapanuli sell their pepper production in the auction market to look for prices in accordance with their wishes and avoid the middlemen who provide prices that do not correspond to the market price. The existence of auction markets also helps farmers in distributing all production at the right price (BPS, 2018).

B. METODHOLOGY

Research Design

This research uses the method of descriptive research with qualitative approach and quantitative research methods using SPSS software to answer sampling how effectiveness auction market commodities of red pepper.

Sample

Sample was done by accidental sampling where in selecting a sample by choosing who happened to be or is found at the location. Respondents or samples taken as many as 30 persons. To answer the problem used method of description is to create a description, picture or painting in a systematic, factual and accurate information on the facts, characteristics and relationships between

phenomena investigated and this study using survey research, namely investigation conducted for get the facts of phenomena that exist and statistical analysis (Sugiyono, 2010).

Research Instrument Proportion test

The research uses descriptive method by using proportion test to check the effectiveness perception of farmers about auction market.

Ho: P ≤ 50% H1: P> 50%

Where:

Ho: allegedly less than 50% of the farmers have a perception that red pepper auction market institutions have a high effectiveness.

Ha: allegedly over 50% of the farmers have a perception that red pepper auction market institutions have a high effectiveness.

Siginifikansi level: α = 0.05 (5%)

Z count = $\frac{\frac{X}{n} - Po}{\frac{Po\,(1-Po)}{n}}$ Information :

x: Number of samples of farmers who mentioned the auction market institutions have high effectiveness

n: The total number of farmers of samples Po: Confidence coefisient (50%)

Testing criteria:

Z calculated > Z table : Ho rejected, Ha accepted Z calculate ≤ Z table : Ho accepted, Ha rejected.

Multiple Analyze regression

Analyze of regression is tool analyze that explain about causality by one ore more independent variable to dependent variable (Sudarmanto, 2005). To measure variable of X1 until X4 this research uses rate scale rate or assessment scale for a quality. To get the value of effectiveness is the result of the total number of each element of the question about the effectiveness itself which will later be compared with each variable. The multiple linear regression models in this study are as follows:

Y = a + b1.X1 + b2.X2 + b3.X3 + b4.X4

Information:

Y : The effectiveness of the auction market A : Nuse values constants

b1-b4 : Regression Coefficient X1 : Feasibility Price

X2 : Social Relationships X3: Attitude Farmer

X4 : Performance Management

To find the value of a then the formula is sought

a = $\bar{y}$ - b11 + b2 $\bar{X}\bar{X}_2$

$$\bar{y} = \frac{\sum y}{n}$$

$$\bar{X} = \frac{\sum x_n}{n}$$

$$b_1 = \frac{(\sum yx_1)(\sum x_2^2) - (\sum yx_2)(x_1x_2)}{(\sum x_1^2)(\sum x_2^2) - (\sum x_1x_2)^2}$$

$$b_2 = \frac{(\sum yx_2)(\sum x_1^2) - (\sum yx_1)(x_1x_2)}{(\sum x_1^2)(\sum x_2^2) - (\sum x_1x_2)^2}$$

$\sum x_n^2$ = n

$\sum(x_n^2) - (\sum x_2)^2/$

Hypothesis testing :

Ho: b1 = b2 =
b3 = b4 = 0
Ha: b1 ≠ b2 ≠
b3 ≠ b4 ≠ 0

Ho: There is no real influence among eligibility prices, social relations, attitudes of farmers and performance management of the effectiveness of the auction market institutions.

Ha: There is a real effect between price worthiness, social relations, attitudes of farmers and performance management of the effectiveness of the auction market institutions.

Testing criteria:

By using SPSS software, it can be analyzed as follows:

1) R square or the coefficient of determination shows the percent of the dependent variable that can be explained by the independent variable. For a number of independent variables more than two variables use the adjusted R-square.
2) From the ANOVA test or F test to determine whether the independent variables jointly affect the dependent variable, it can be concluded if the sig < 0.05, then the independent variables together have an effect on the dependent variable. The decision is as follows:
   The significance value < α then Ho is rejected The significance value > α then Ho is accepted
3) T test to determine whether there is influence of each independent variable on the dependent variable, then the decision is as follows (α = 0.05 significance level): The significance value <α then Ho is rejected
   The significance value> α then Ho is accepted.

C. RESULTS AND DISCUSSION

Process activity or activities called for the creation of a mechanism of regular activities that later formed the most and reduce failures. Auction market mechanism is how the administrators manage the process of auctions become more focused and tersistem. Auction market mechanism in District Siborongborong as follows

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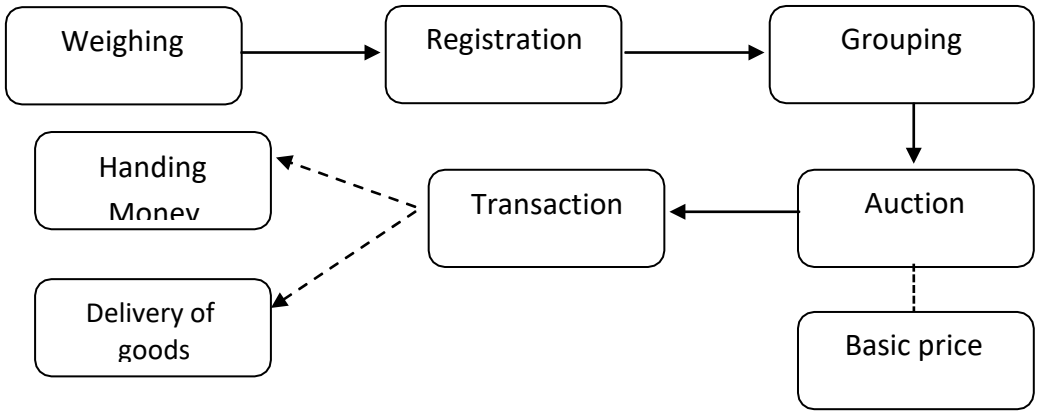

Figure 1. Auction Market Mechanism Siborongborong

Mechanism Siborongborong

Auction market mechanism starting from the farmers come to the auction market to bring production of red pepper, auctioneer and the buyers (traders) come to the auction market then these productions were weighed and registered into a memorandum. Obtained from the process of weighing the gross weight which is then written into the memorandum. After that, the gross weight gained will be reduced so that the resulting shrinkage of red pepper net weight. With the provision that if the gross weight less than 30 kgs, the shrinkage to kgs whereas if the gross weight of more than 30 kgs, the contraction to 1 kgs. The memorandum then given to the farmers. Then red pepper had been weighed, grouped by physical substance of red pepper. In one grouping of red pepper overall weight is calculated by including the owner's name and red chillies in one group weighing less than 300 kg. Then do numbering on each sack groups for subsequent auction process in sequence. After that, the auction is done by opening a base price set by PERUSDA (government local company). With the highest price bid made by the buyer, it will be sold and decided by the auctioneer to the requirements of traders directly on the spot. The buyer (merchant) direct payment transactions in accordance with the amount of red pepper that has been purchased traders. auction conducted by opening a base price set by Perusda. With the highest price bid made by the buyer, it will be sold and decided by the auctioneer to the requirements of traders directly on the spot.

The effectiveness of red pepper auction market institutions in Siborongborong can be seen in Table 1. In the auction market institutions Siborongborong farmers who entered in the market that sell their products will benefit more than sold outside the auction market and the guarantee of all the products that are sold in auction markets sold and taken by traders entirely. This is the reason farmers prefer to sell the production of red chilli in the auction market. Output indicators institution explained through the amount of profit for farmers, guarantee price signals (unsold) all production and feasibility of selling prices of red chillies. The large profits for farmers have a level of 84.33% effectiveness, most farmers assess the auction market have been effective because of its close location, easy implementation, the prices are relatively high and relatively low pieces so that greater profits. But there are also farmers who feel the advantage is still not optimal because sometimes not been able to cover the costs incurred during production. However farmers were aware when sold through traders (middlemen) in fact they will be the losers. Indicators of price signals assurance (unsold) all of the production have a level of effectiveness of 92%, the auction market already have broad access, in Sub-borong Siborong each own 5 traders remained in the auction process. In every auction there are usually 5 to 8 participating merchants so that the entire production of red pepper almost always sold out. The last indicator, feasibility indicators selling price of red chilli has a degree of effectiveness of 84.33%, although the price has decreased but sometimes pepper peppers are sold through auction markets have a higher selling price than through the merchant directly and eliminate the monopoly trader. Besides the auction market is believed to keep the price from being manipulated by traders.

Flexibility is described through indicators suitability institution frequency and time of the auction to the availability of the results, the feasibility of selling prices despite the price change, justice for farmers in a cycle through an auction site and the ability to solve problems when there are traders who defaulters in payment. Indicators suitability frequency and time of the auction to the availability of the results of having degree of effectiveness of 92%. When not harvest or during the harvest season, the auction market is always open to accommodate all peasant production. It ensures all production can be channeled farmers and traders would need no small red pepper can be fulfilled. Feasibility indicators selling prices despite the price change has amounted to 78.66% rate of effectiveness. The selling price of red chilli was always subject to change according to the quality of pepper and market conditions. But the auction market can still adjust the conditions so that the decision price is not too detrimental to farmers. One of the concrete actions that the auction market in Siborong-making rules of their entire stock has a base price of red pepper which requires traders to auction at a price above the base price. This is done to anticipate the prices too fell. Indicators justice for farmers rotate auction site has amounted to 93.33% rate of effectiveness. This indicates that the auction market in the auction process carried out in one location for easy administration and the market is able to provide red pepper in considerable amounts. Indicators ability to solve problems when there are traders who are absent in payments have a level of 100% effectiveness. These results indicate that the auction market is very flexible in dealing with payments.

Whether there is tension within the agency explained through indicator good relations between farmers, good relations between farmers and administrators auction market, auction market performance management, farmers consent to decisions taken by the board and the justice division of the proceeds. Indicators of good relations between farmers had amounted to 96.66% rate of effectiveness, familial relationships among farmers is very thick so that they live in harmony together and rarely conflicts with other farmers in the group. Indicators of good relations between farmers and administrators auction market has a level of effectiveness of 91%, this high number for the auction market managed by the management so that the family, openness, and greater farmer confidence. Performance indicators caretaker auction market has a level of effectiveness of 91%, most farmers assess the auction market committee is working properly, industrious, resolute, disciplined, and open. Indicators farmers consent to decisions taken by the board has a 93.33% rate of effectiveness, farmers generally agree with the decision taken by the board because it usually is the result of consultation with the decision. Last indicator that

justice division of the proceeds has amounted to 93.33% rate of effectiveness, this figure explains that generally farmers argue fair distribution of the sale proceeds. From the discussion above it can be seen in the table below as follows: Indicators farmers consent to decisions taken by the board has a 93.33% rate of effectiveness, farmers generally agree with the decision taken by the board because it usually is the result of consultation with the decision. Last indicator that justice divisions of the proceeds have amounted to 93.33% rate of effectiveness, this figure explains that generally farmers argue fair distribution of the sale proceeds. From the discussion above it can be seen in the table below as follows: Indicators farmers consent to decisions taken by the board has a 93.33% rate of effectiveness, farmers generally agree with the decision taken by the board because it usually is the result of consultation with the decision. Last indicator that justice divisions of the proceeds have amounted to 93.33% rate of effectiveness, this figure explains that generally farmers argue fair distribution of the sale proceeds. From the discussion above it can be seen in the table below as follows: This figure explains that generally farmers argue fair distribution of the sale proceeds. From the discussion above it can be seen in the table below as follows: This figure explains that generally farmers argue fair distribution of the sale proceeds. From the discussion above it can be seen in the table below as follows:

Table 1. The effectiveness of Red Pepper Auction Market Institutions

No.	Indicator	interval Scores	mean score	Level of Effectiveness (%)
output Institute				
1.	Major advantages for farmers	0-3	2.53	84.33
2.	Warranty channeled all production	0-3	2.76	92
3.	Feasibility selling price of red chilli	0-3	2.53	84.33
Amount		0-9	7,82	86.88
Flexibility institution / flexibility of adaptation				
1.	The suitability of the frequency and time of the auction to the availability of results	0-3	2.76	92
2.	Feasibility selling prices despite price changes	0-3	2.36	78.66
3.	Justice for farmers to rotate an auction site	0-3	2.8	93.33
4.	Ability to solve problems when there are traders who defaulters in payment	0-3	3	100
Amount		0-12	10.92	90.99
Whether there is tension in the family				
1.	The good relations between farmers	0-3	2.9	96.66
2.	The good relations between farmers with the management of the auction market	0-3	2,73	91
3.	performance management market auction	0-3	2,73	91
4.	Justice division sales results	0-3	2.8	93.33
5.	Member approval to decisions taken by the board	0-3	2.8	93.33
Amount		0-15	13.96	93.06
Total		**0-36**	**32.70**	**90.31**

Source: Primary Data Processed, 2018

Based on Table 2 it can be seen that the number of 27 people (90.00%) farmer members assess agency red pepper auction market has a high effectiveness with a score of 26 to 36. Meanwhile, 2 (6.67%) assess farmers market institutions have the effectiveness of red lelangcabai being with a score of 12 to 25.

Then a number of 1 (3.33%) farmer members assess agency red pepper auction market has a low effectiveness with a score of 0 to 11. This means that most farmers assess pepper auction market institutions merahmemiliki high efficacy and few farmers who thought that auction market is not effective. The highest score of the three components is obtained in the presence or absence of tension in institutions of 93.06%, followed by the flexibility institution 90.99%, amounting to 77.47%, and 86.88% output component agencies.

Table 2. Distribution of Organization Effectiveness Auction Market Red Pepper

No.	Category amount	(Person)	Percentage (%)
1.	Low(0-11)	1	3.33
2.	Medium(12-25)	2	6,67
3.	High(26-36)	27	90.00
amount		**30**	**100**

Source: Primary Data Processed, 2018

The first hypothesis (Ha) in this study is expected to be more than 50% of the farmers have a perception that red pepper auction market institutions have a high effectiveness. To prove the first hypothesis is then tested porposi as follows:

Z count = $\frac{\frac{X}{n} - Po}{\frac{Po\,(1-Po)}{n}}$ = $\frac{\frac{27}{30} - 0{,}5}{\sqrt{\frac{0{,}5\,(1-0{,}5)}{30}}}$ Z count = 4.38178046

Z Table = 1.645

Calculate Z > Z Table: Ho rejected, Ha accepted

Based on calculations using porposi test showed that the Z count sebessar 4.38178046 1.645 while the Z table so that Ho refused and Ha accepted. This means that most farmers (> 50%) of farmers in the sub-borong Siborong have the perception that red pepper auction market has a high effectiveness.

Based on Table 3 is known that significant value for the variable X1 is equal to 0,010 and α = 5%. Thus the significance value (0.010 <0.05), meaning that partial feasibility of prices has a significant influence on the effectiveness of the auction market. Significant value for X2 is equal to 0.330 and α = 5%, thus the significance value (0.330> 0.05), meaning that partial social relations do not have a significant influence on the effectiveness of the auction market. Significant value for X3 is equal to 0,012 and α = 5%, thus the significance value (0.012 <0.05), meaning that the partial attitude of the farmers have a significant influence on the effectiveness of the auction market. Significant value for the variable X4 is 0,000 and α = 5%, thus the significance value (0.000 <0.05); means partial performance management has a significant influence on the effectiveness of the auction market. Based on the results obtained sig 0.000 Anova (less than 0.05) means simultaneously independent variables, namely the feasibility of price, social relations, attitudes of farmers, and performance management have significant influence on the effectiveness of the auction market. the R value of 0.927 which indicates that the correlation or relationship between the effectiveness (dependent variable) with the feasibility of price, social relations, attitudes of farmers, and performance management (independent variables) have a fairly high degree of correlation is equal to 92.7%. For R square of 0.927 means that 92.7% of the auction market effectiveness able predicted by the feasibility of price, social relations, attitudes of farmers, and the remaining 7 performance management, 3% by other variables not examined in this study. It is known that multiple linear regression equation as follows:

Table 3. Regression of Factors Influencing Effectiveness of Red Pepper Auction Market

No.	Variables	Regression coefficient (B)	t Count	Sig
1	Feasibility Price (X1)	1,614	2.798	0,010
2	Social Relationships (X2)	0.533	.994	.330
3	Farmers attitude (X3)	0.975	2.722	0,012
4	Performance Management (X4)	2,675	4.873	0,000
Constants		5.674		
R square		0.927		
adjusted square		0.916		
F count		79.953		
Significant		0,000		

Source: Primary Data Processed, 2018

Y = 5.674 + 1,614X1 + 0,533X2 + 0,975X3 + 2,675X4

Information :

Y = effectiveness red pepper auction market X1 = feasibility prices
X2 = social relationships X3 = the attitude of farmers
X4 = performance management

The following will discuss the results of the hypothesis analysis each of the factors which significantly affect the effectiveness of red pepper commodity auction market is the result of multiple regression analysis.

1. Feasibility Price

Significant value for the variable X1 is equal to 0,010 and α = 5%. Thus the significance value (0.010 <0.05), which means that the feasibility of the price has a significant influence on the effectiveness of the auction market. farmers who come to the auction market expects higher selling prices compared to selling outside the auction market.

2. Attitude Farmer

Significant value for X3 is equal to 0,012 and α = 5%, thus the significance value (0.012 <0.05), meaning that the attitude of the farmers have a significant influence on the effectiveness of the auction market responses or actions of farmers who benefited from the presence of the auction market. In addition to benefitting from the price, the farmers also benefited from the price signals to all of the production of red pepper that they bring to the auction market itself.

3. Performance Management

Significant value for the variable X4 is 0,000 and α = 5%, thus the significance value (0.000 <0.05), means that performance management has a significant influence on the effectiveness of the auction market. Board task results auction market where the start of the opening of the base price until the auction process occurs and eventually all be sold. Farmers see things like that directly place is. Implementation committee work directly witnessed by farmers start weighing up the results they bring are paid directly by the buyer.

D. CONCLUSION

Based on the results of research and the results of testing that has been done, it can be concluded as follows:

1. The mechanisms involved in the auction market Siborongborong ranging from farmers to come directly to the place and red pepper weighed and classified and numbered, conducted the auction process by opening a base price and end the transaction of goods and money.
2. The effectiveness of red pepper commodity auction market in the district of North Tapanuli Siborongborong relatively effective where 27 farmers (90.00%) assess the auction market has a high effectiveness.
3. Factors that influence on the effectiveness of the auction market red pepper namely the feasibility of price (X1), the attitude of farmers (X3) and performance management (X4) and while factors were not significant, namely social relations (X2) with a confidence level of 95%.

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