Institutional Analysis of Agribusiness Marketing in North Sumatra Agriculture Production Center

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Abstract: Farmers are still difficult to escape from intermediary traders. They are often as the smallest party in the marketing system of agricultural production centers. The objectives of this research is to identify various forms of agribusiness marketing institutions, to analyze the factors that influence the use of agribusiness centers, and to develop model for agribusiness marketing institutional development policies. The research populationsarefarmers, traders and consumers in 6 regencies in North Sumatra. Sample was collected using convenience sampling and snowball sampling methods. There are 130 farmers 50 traders, 6 commodities namely: rice, corn, cabbage, red chili, orange and meat with. The data wereanalyzed by using multiple regression method. Parameters such asfarmer'sage, education level, farmer'sknowledge on agribusiness centers, farmers'informal ties with nonagribusinesscenter institutions and farmers participation in counseling havepositive value, while products volume and distance to agribusiness center have negative value.Farmer's decision to utilize the agribusiness center was significantly influenced by farmer's knowledge on the agribusiness center and informal ties with non agribusiness center institutions. Marketing institutions in this agriculture production centers are establishment of agribusiness units by involving input traders, farmer groups,and tradersunder the same management control, the development of production and commodity markets information systems and partnership development.

1 INTRODUCTION

Marketing institutions in agricultural commodities are including farmers, collector, intermediary/wholesaler traders and retailers (Kuma'at, 1992). Problems that faced by marketing system is among other inefficient marketing activities, that is not yet able to deliver agricultural product from farmers to consumers at a low cost and provide fair compensation from the last total consumer price to all participant parties in production and marketing of agricultural commodities. Such fair distribution is remuneration distribution of marketing functions according to the contribution of each marketing institution (Mubyarto, 1989).

As so far, process of production and commodity handling still emphasizes on individual abilities and skills. Processes that involving some institutions such as organization, norms or the arrangements, are generally still focused on collecting and marketing process at certain scale. For most regions,roles of

agricultural institutions and farmers do not exist yet. In fact, there are various functions of agricultural institutionsincluding as driver, collectors and suppliers of production facilities, generating interest and attitudes, and others.

Due to the reason, one of agribusiness development problems in agriculture production center in North Sumatra is the institutions have not functioned and run as they should in the agribusiness system. On the other hand, the existence of agricultural institutions is a necessity and prerequisite for the success of agribusiness activities. Through agribusiness system implementation, it is expected that there will be optimal integration among strategic agribusiness subsystems namely the subsystem of means of production, production processes, post-harvest and commodity processing and marketing.

The purpose of this study is to: 1) Identify the form or model of agribusiness marketing institution in agriculture production centers of North Sumatra.2) identify the factors that influence the use

of agribusiness centers in North Sumatra, and 3). develop model for agribusiness marketing institutional policies.

2 RESEARCH METHODS

Six regencies as agriculture production center in North Sumatera was selected for research namely Simalungun, Serdang Bedagai, Karo, Dairi, Langkat and Batubara. The populations are farmers, traders and consumers in the six (6) regencies. Sample (respondent) was collected using convenience sampling and snowball sampling methods. The sample is 130 farmers and 50 traders and also 6 commodities namely rice, corn, cabbage, red chili, orange and meat. The data was analyzed using multiple regression method.

3 RESULTS AND DISCUSSION

3.1 Development of Food Commodity Prices in North Sumatra

Average price of basic stuff in 33 Regencies/Cities of North Sumatra in the first week of February 2016 (01-06 February 2016) is as follow. Kuku Balam Rice is Rp. 11,420/kg, Jongkong Ir 64 Rice is Rp. 10,500/kg, Pure Beef is Rp. 110,830/kg. Dry Corn Rp.4,870 / kg, Imported Onion Rp. 24,290/kg, Local Onion Rp. 29,130 / kg, and white onion Rp. 29,450 / kg.
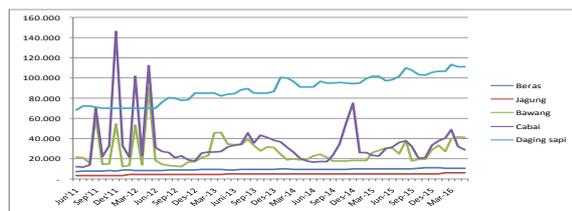

Figure 1:Growth of Strategic Food Price in North Sumatera.

Information obtained from Market Centerof Medan City is beef prices soared sharply, from normal selling price Rp. 90,000-Rp. 95,000/kg, now increase to Rp. 110,000/kg. This increase occurred due to limited beef supply in Medan City which made beef prices soared (Riyadh, 2017).

3.2 Distribution Channel analysis

In general, farmers make sales to trade institutions such as agents, middlemen, mills (rice), large traders and retailers and directly to consumers. This can be seen in the following description.

3.2.1 Rice Distribution Channel

a. Farmers - Agents - Sentosa Grinders- Wholesalers - Markets - Retailers – Consumers.
b. Farmers - Agents - Sentosa Grinders - Large traders - Markets Center - Consumers.

3.2.2 Corn Distribution Channel

Farmers - Refineries - Collector traders - Wholesalers - Retailers - Consumers.

3.2.3 CabbageDistribution Channel

a. Farmers - collectors - Large traders – Consumers.
b. Farmers - Collector - Retailers – Consumers.
c. Farmers - Collectors – Exporters.

3.2.4 Red ChilliDistribution Channel

Farmers - Collectors - Retailers – Consumers.

3.2.5 OrangeDistribution Channel

a. Farmers - Collectors - Retailers – Consumers.
b. Farmers - Retailers – Consumers.

3.2.6 Beef Distribution Channel

Farmers - Collectors – Slaughter House – Market – Consumers.

3.3 Market Behavior

1) Farmer distribution according to commodities selling method at the research location

Table 1: Farmer distribution according to commodities selling method at the research location.

No.	Selling Method	Number of Farmers	
		Person	%
1.	Sold per unit on quality basis	67	49,60
2.	Sold per unit on mixed basis	38	28,10
3.	Sold on farmat harvesting time	30	22,20
	Total	135	100,00

2) Traders distribution according to commodities selling method at the research location

Table 2: Traders distribution according to commodities selling method at the research location.

No.	Selling Method	Number of traders	
		Person	%
1.	Sold per unit on quality basis	34	68,00
2.	Sold per unit on mixed basis	10	20,00
3.	Sold on farmat harvesting time	6	12,00
	Total	50	100,00

3) Pricing Institution

Table 3: Farmer's distribution according to Pricing Mechanism at the research location.

No.	Selling Method	Number of Farmer	
		Person	%
1.	Determined unilaterally by the buyer	24	17,80
2.	Set on mutual agreement basis without taking into account the price fluctuations	56	41,50
3.	Set on mutual agreement basis by taking into account the price fluctuations	55	40,70
	Total	135	100

4) Farmer distribution according to payment method received at the research location

Table 4: Farmer distribution according to payment method received at the research location.

No.	Selling Method	Number of Farmer	
		Person	%
1.	Cash	88	65,20
2.	Pay later	47	34,80
3.	Mixed	0	0,00
	Total	135	100,00

5) Cooperation between Farmers and marketing institutions

Table 5: Farmer distribution according to the relationship with buyer at the research location.

No.	Type of Buyer	Form of Relationship				Total
		Free Buyer		Patronize		
		person	%	person	%	
1.	Collector	64	60,37	42	39,63	106
2.	Wholesaler	22	81,48	5	18,52	27
3.	Partner Company	Contract	-	-	-	2

6) Implementation of Marketing Function

Table 6: Respondent distribution according to post harvesting activities at the research location.

No.	Description	Farmers respond	
		Person	%
1	Sorting	53	39,30
2	Grading	26	19,30
3	Storage without cooling	15	11,10
4	Storage with cooling	0	0,00
5	Milling	20	14,80
6	Packaging	21	15,60
	Total	135	100,00

7) Marketing Performance

Table 7: Average of dominant commodity marketing margin marketed by traders at the research location.

Commodity	Buying Price Average	Selling Price Average	Average Margin	
	Rp	Rp	(Rp)	(%)
Rice /grain	5.366,67	6.466,67	1.100,00	20,49
Corn	3.500,00	4.800,00	1.300,00	37,14
Cabbage	521,43	757,14	235,71	45,20
Red Chili	38.300,00	47.400,00	9.100,00	23,75
Orange	5.357,14	7.714,29	2.357,14	43,99
Beef	99.600,00	1.24520,00	24.920,00	25,02

8) Profit of Marketing Institution

Table 8: Average of trader profit for dominant commodity at the research location.

Commodity	Buying Price Average	Selling Price Average	Average Margin	
	Rp	Rp	(Rp)	(%)
Rice /grain	1.100,00	762,50	337,50	30,68
Corn	1.300,00	724,38	575,62	44,27
Cabbage	235,71	171,43	64,28	27,27
Red Chilli	9.100,00	498,70	8.601,30	94,51
Orange	2.357,14	800,00	1.557,14	66,06
Beef	24.920,00	4740,00	20.180,00	80,97

9) Share Received for Farmer

Table 9: Average share received by farmers at the research location.

Commodity	Buying Price Average	Selling Price Average	Average Margin	
	Rp	Rp	(Rp)	(%)
Rice /grain	5.366,67	6.466,67	82,98	30,68
Corn	3.500,00	4.800,00	72,91	44,27
Cabbage	521,43	757,14	68,86	27,27
Red Chili	38.300,00	47.400,00	80,80	94,51
Orange	5.357,14	7.714,29	69,44	66,06
Beef	99.600,00	124.520,00	79,98	80,97

10) Factors Affecting the Utilization of Agribusiness Center Areas by Farmers

$$Y = 0,0048 + 0,0002X_1 + 0,0011X_2 - 2,4715X_3 - 0,0083X_4 + 0,9036X_5 + 0,0176X_6 + 0,0066X_7 + e \qquad (1)$$

Table 10: Factors Affecting the Utilization of Agribusiness Center Areas by Farmers.

Predictor	Coefficient	Sig.		Note
Constant	0,0048			
Farmer age (X_1)	0,0002	0,8179	0,05	Not Significant
Education level (X_2)	0,0011	0,8238	0,05	Not Significant
Product Volume (X_3)	-2,4715	0,3262	0,05	Not Significant
Distance to agribusiness center (X_4)	-0,0083	0,6814	0,05	Not Significant
Farmer knowledge on agribusiness center (X5)	0,9036	0,0000	0,05	Significant
informal ties between farmer with non agribusiness center (X6)	0,0176	0,0217	0,05	Significant
Farmer participation in counseling (X7)	0,0066	0,679	0,05	Not Significant
F testR.Square	145,1782	0,9998	0,05	Significant

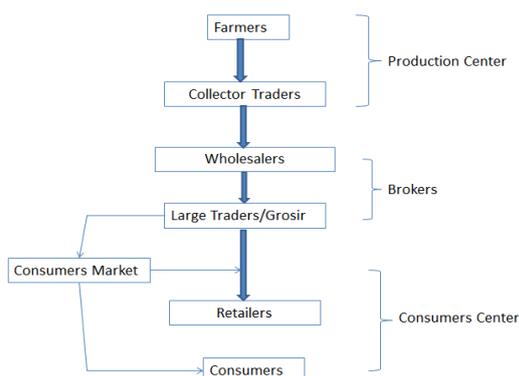11) Marketing Institution Development Policy for Production Center Areas

Figure 2: Marketing Channel in North Sumatera.

Agribusiness center area was developed to increase farmers' income by cutting or shortening the marketing chain, in turn achieve a better marketing efficiency and margin distribution with a marketing system. To the end, it can be developed as in the following Figure.
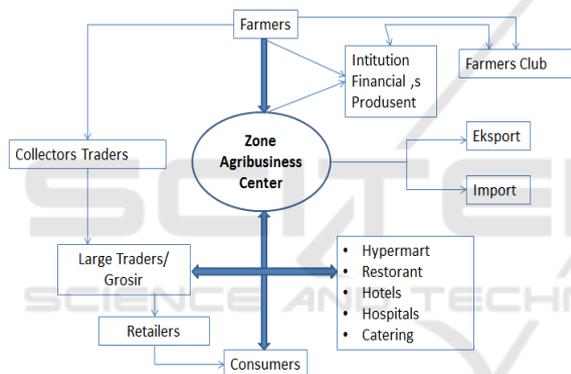

Figure 3: System of Marketing to increase farmers' income.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusion

Some conclusions that can be drawn are as follows:

1. Coefficient of farmer age (X1), education level (X2), farmers' knowledge about agribusiness center area (X5), informal farmer ties with non agribusiness center institutions (X6) and farmer participation in counseling (X7) are positive while the product volume (X3) and distance of farmer's residence to the center area (X4) are negative. Farmersdecision to take advantage on agribusiness centers is significantly influenced by farmers' knowledge on agribusiness centers

(X5) and informal farmer ties with non agribusiness center institutions (X6).

2. The limitations of farming scale are weaknesses in the bargaining position and products marketing in North Sumatra, as characterized by limitations in obtaining transparent price information at a higher market level, thus causing the level of prices received by farmers lower than prevailing prices on the market.

4.2 Recommendation

1. To increase the number and quality of marketing institutions in agricultural production centers in North Sumatra, local governments (provinces and regencies/cities) through relevant agencies should establish agribusiness units in this centers by involving input traders, farmer groups and agricultural commodities based traders in one management control.

2. Local governments (provincial and regencies/cities) in North Sumatra should make necessary improvements and develop agricultural commodities marketing systems in the production centers through the development of production information systems and commodity markets to determine data and information about production, prices and distribution chains in order to maintain stability price of agricultural production.

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