

Development of Coffee Agribusiness toward Community Income in Siborongborong District of North Tapanuli Regency

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Abstract—Coffee (*Coffea arabica* L.) is one of the priority commodities to be developed, because farming provides high profits, so it can be used as a source of income for farmers. This research was conducted in Siborongborong District, North Tapanuli Regency. The number of villages in Siborongborong District are 20 villages and 1 City. The number of farmer groups in Siborongborong District are 319 Farmer Groups. Based on the results of the research in Siborongborong, the following conclusions can be derived: Potential variables of land, harvest and post-harvest, overall marketing has a significant effect on the income of farmers, while planting and maintenance do not significantly affect the income of farmers in Siborongborong. Sumatera Specialty Coffees Company does not affect the income farmers in Siborong Borong because farmers sell their coffee more to the broker.

Keyword —Coffee, Agribusiness, Income.

I. INTRODUCTION

The most famous of Sumatera coffee comes from North Sumatera with coffee from Sidikalang, Lintong and Mandheling. Sumatera coffee has heavy taste. It can be said the heaviest and complex types of coffee in the world. Some coffee experts say Sumatera coffee has a unique taste because it is characterized by the aroma of spices and earthy. Sumatera coffee has smooth texture and sharp smell. it is causes that Sumatera coffee one of the best-selling coffee. Sumatera coffee is processed in two ways, namely the semi-washed and dry-processed process. Planted altitude

and ideal ground makes Sumatra coffee has highest quality even in the eyes of International. Siborongborong is sub-district in North Tapanuli Regency, North Sumatra of Indonesia. This sub-district is located in Siborongborong market. Siborongborong consists of 20 villages and 1 urban village with the majority of the occupation being farmers. The conditions of agriculture, especially the results of coffee plantations, have experienced significant problems today. This condition does not make the level of welfare of farmers increase, but from the information of the farmers almost every harvest season they experience losses because of low coffee prices while the cost of coffee production is very high. This is occur because undeveloped pattern of coffee marketing. Farmers also acknowledge that the biggest obstacle faced is in terms of marketing coffee. generally, the distribution pattern of coffee production from producers (farmers) to consumers in Siborongborong uses intermediary traders who come to the garden and some are sold directly to retailers in traditional markets. This broker can be an agent.

II. MATERIALS AND METHODS

Naturally, coffee plants have taproots so they are not easy to collapse. However, the taproot is only owned by coffee plants that originate from seedlings (grafting) whose rootstock comes from seedlings. While coffee plants originating from seedlings of cuttings, grafts, or grafting with rootstock from cuttings have not taproot.



Fig.2.1: Arabica Coffee Plant Fruiting

The research approach used in this study is a survey. This type of research is quantitative descriptive. The nature of this research is explanatory, namely: research conducted to determine the value of independent variables, both one or more variables (independent) without making comparisons or connecting with other variables (Sugiyono, 2006). This research was conducted in Siborongborong . The choice of this area was due to being one of the coffee agribusiness centers in this area. The population in this study is Farmer Groups which generally have coffee farms. The number of farmer groups in Siborongborong are 316 farmer groups. The sample in this study use random sampling which is used when population has a higher level than the other groups. According to Prasetyo (2005) the sample can be calculated using the Slovin formula. So the number of samples in this study were 73 farmer groups, and each

farmer group was taken by 2 family heads, so that the number of samples taken was 146 heads of households. Based on the Slovin formula, the number of villages as samples taken from a population of 200 villages are:

$$n = \frac{319}{319(0,1)^2 + 1} = 73$$

The data collection technique used in this study is

1. Questionnaire given to farmers in Siborongborong which are included as respondents.
2. The documentation study conducted in this study is form of description data research area and data from the Agriculture Service, Agricultural Extension Agency and the Central Bureau of Statistics of North Tapanuli Regency.

III. RESULT

Table.4.1. Explanation of Respondents on Understanding Variables About Land Potential

Variable	Strongly Disagree		Disagree		Disagree		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%
Land Potential (X1)	9	6,16	12	8,22	45	30,82	42	28,77	38	26,05
Total	9	6,16	12	8,22	45	30,82	42	28,77	38	26,05

Source: Primary data processed in 2016

The results showed that land potential strongly disagreed 9 people were 6.16%, disagreed 12 people were 8.22%, disagreed 45 people were 30.82%, agreed 42 people were 28.77% and strongly agreed 38 people were 26.05%.

Table 4.2. Explanation of Respondents on Understanding Variables About Planting and Maintenance of Coffee Plants

Variable	Strongly Disagree		Disagree		Disagree		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%

Planting and Maintenance of Coffee Plants (X2)	2,74	8	5,48	12	8,22	29	19,86	93	63,70	
Total	4	2,74	8	5,48	12	8,22	29	19,86	93	63,70

Source: Primary data processed in 2016

From Table 4.2 above shows the results that strongly disagree 4 people were 2.74%, disagree 8 people were 5.48%, disagree 12 people were 8.22%, agree 29 people were 19.86% and strongly agree 93 people were 63.70%. In this case the understanding of farmers in planting and maintaining coffee is very high, this is evidenced by the high percentage of 63.70%, this provides that planting and maintaining good coffee plants to get maximum production.

Table 4.3. Explanation of Respondents on Understanding Variables About Harvest and Post Harvest

Variabel	Strongly Disagree		Disagree		Disagree		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%
Understanding of Coffee Farmers About Harvest and Post Harvest (X3)	2	1,22	5	3,05	14	8,54	125	76,22	18	10,98
Total	2	1,22	5	3,05	14	8,54	125	76,22	18	10,98

Source: Primary data processed in 2016

The results showed that the public's understanding of harvest and post-harvest was very high, namely agreeing as many as 125 people were 76.22%, followed by strongly agreeing 18 people were 10.98%, disagreeing 14 people were 8.54%, disagreeing 5 people were 3.05% and the lowest strongly disagrees 2 people were 1.22%. The farmers' understanding of harvest and postharvest provides that the harvest and post-harvest of coffee plants are in accordance with the standards to get good quality production.

Table 4.4. Explanation of Respondents on Understanding Variables About Marketing

Variabel	Strongly Disagree		Disagree		Disagree		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%
Understanding of Coffee Farmers About Marketing (X4)	6	4,11	15	10,27	16	10,96	83	56,85	26	17,81
Total	6	4,11	15	10,27	16	10,96	83	56,85	26	17,81

Source: Primary data processed in 2016

The results showed that farmers' understanding of marketing agreed 83 people with a percentage of 56.85% followed strongly agree 26 people were 17.81%, disagreeing 16 people were 10.96%, disagreeing 16 people were 10.27% and Strongly Disagree 6 people were 4.11%. The understanding of farmers about the marketing of coffee beans in Siborongborong District can increase the income of Siborongborong community.

Table 4.5. Explanation of Respondents on Understanding Variables About Increasing Income

Variabel	Strongly Disagree		Disagree		Disagree		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%
Understanding of Coffee Farmers About Increased Income (Y1)	10	6,85	11	7,53	38	26,03	75	51,37	12	8,22
Total	10	6,85	11	7,53	38	26,03	75	51,37	12	8,22

Source: Primary data processed in 2016

The results showed that farmers' understanding increases income of coffee strongly agreed that 75 people were 51.37%, disagreeing 38 people were 26.03%, strongly agreeing 12 people were 8.22%, disagreeing 11 people were 7.53 % and strongly disagree 10 people were 6.85%.

Table 4.6. Explanation of Respondents About the Role of Sumatra Specialty Coffees Company

Variabel	Strongly Disagree		Disagree		Disagree		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%
Understanding of Coffee Farmers About the Role of PT. Sumatra Specialty Coffees (Y2)	29	0,20	47	0,32	51	34,93	15	10,27	4	2,74
Total	29	19,86	47	32,19	51	34,93	15	10,27	4	2,74

Source: Primary data processed in 2016

The results of the table above show that the role Sumatera Specialty Coffee Company strongly agree 4 people were 2.74%, agree 15 people were 10.27%, disagree 51 people were 34.93%, disagree 47 people were 32.19% and strongly disagree 29 people were 19.86%.

IV. DISCUSSION

The Effect of Agribusiness Farmers income in Siborongborong Region

The results of the multiple regression analysis carried out showed the effect of land potential increasing the income of farmers, in this case R which shows correlation, namely the correlation / relationship between the independent variables to the dependent variable. The number of R obtained 1.000a (attachment 2) means that there is no significant influence between the variables of land potential, planting and

maintenance, harvesting and post-harvesting and marketing increasing the income of farmers because the value of 1,000a. If the value is close to number 1, then there is a relationship and conversely approaches 0, then the relationship get lower . R Square (R²) or quadratic R shows the coefficient determination, the number of R² is 1,000, means that the land potential has an effect of 100% income of farmers in Siborongborong. The independent variable affect dependent variable by 100%.

Table 4.7. The Effect of Availability Public Facilities Housing Selling Prices in Analysis of Coefficients on Double Regression

Factors	Unstandardized coefficient		Standardized coefficient		Sig.
	B	Std. error	Beta	t	
Constant	4.651	.000	.	.	.
Land Potential (X ₁)	.719	.000	.441	.	.
Planting and Maintenance (X ₂)	-.261	.000	-.343	.	.
Harvest and Post Harvest (X ₃)	.501	.000	.924	.	.
Marketing (X ₄)	-.179	.000	-.197	.	.

Source: Primary data processed in 2016

The Effect of Sumatera Specialty Coffees Company Toward Siborongborong Regional Development

The existence Sumatra Specialty Company Coffees in Siborongborong in terms of increasing community income is very minimal, it can be seen from the results of research which the community strongly agrees only 2.74% and agrees with a percentage of 10.27%. While those in the less agreeing group with a percentage of 86.99%. In marketing results of farmers are generally carried out by farmers by

selling coffee to agents who buy coffee that are not controlled by the government. The community often sells coffee products to farmers because if sold to quality agents the coffee not preferred that it can be sold entirely even though the price is quite low, whereas if sold to Sumatra Specialty Coffees company the quality of coffee received already has a standard. Only a small part of farmers community can sell their coffee to Sumatra Specialty Coffees Company. Usually farmers who are able to sell in

Company. These farmers who are experienced and have very large capital development of Sumatera Specialty Coffees Company minimal development areas in increasing community income, it is better to increase trade because the company has specialized in coffee making a surplus in a region so that the surplus is exported to other regions which will create trade between regions.

V. CONCLUSION

Based on the results of research the conclusions can be derived as follows:

1. Potential variables of land, harvest and post-harvest, overall marketing has a significant effect income of coffee farmers, while planting and maintenance do not significantly affect the income of farmers in Siborongborong.
2. Sumatera Specialty Coffees Company does not affect the income of farmers in Siborong Borong because coffee farmers sell their coffee more to agents.

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