

THE CHARACTERISTICS AND INSTITUTIONAL TRADE SYSTEM OF RUBBER FARMERS IN ACEH

Basri A Bakar, A. Azis¹ dan E. Fauzi²

¹Peneliti Balai Pengkajian Teknologi Pertanian Aceh

²Peneliti Balai Pengkajian Teknologi Pertanian Bengkulu
Jl. P. Nyak Makam No. 27 Lampineung Banda Aceh 23125
Email : baskar_olin@yahoo.com

ABSTRACT

Determination of rubber institutional options trading system is influenced by the characteristics of the institutional and socio-economic characteristics of farmers . This study aimed to examine the role of the characteristics of rubber farmers in the establishment of institutional options trading system . The research was conducted by survey method . The research was conducted in two districts of West Aceh district and East Aceh . Number of respondents were 360 farmers . Data collection is done by observation and structured interviews to a number of " key informants " and performed Forum Group Discussion (FGD) to strengthen and complete the information required . The results show the magnitude of institutional partnership opportunities for farmers to choose the traditional institutional significantly influenced by the negative direction by the experience of farmers in rubber farming , farmers formal education , household size and number of farmers and rubber trees are tapped and significantly and positively influenced by non-formal education and total family income. Variable total family income has an elasticity response is elastic .

Keywords : Institutional , trade system, rubber

I. INTRODUCTION

Agricultural development is part of the national development and should be carried out continuously, and impacts to improve social welfare. Increased agricultural production not only in terms of quantity, but also quality so as to meet the various needs of the community and be able to increase foreign exchange through agricultural exports. Development of plantation sector is part of the agricultural development can play a role and is able to stimulate the industrial sector. Currently the farm is one of the subsystems in the agricultural environment that contributed most to the country's foreign exchange compared to other sub-sectors.

Rubber is one of the most important agricultural commodity, both nationally and internationally. In Aceh province, a rubber plantation crops af- plant oil palm, with its area reaches 109 104 ha (21.86%) of the plant area of existing plantations with a total production of 63.603 tons / ha or 14.47% of the total production of the main plantation Aceh Province (BPS 2010).

Smallholder tree is still characterized by low production, the state of the less manicured gardens, and the low income of farmers. The low productivity of smallholder rubber

plantations are also caused by lack of capital owned by farmers, so farmers are not able to use the techniques of cultivation in accordance with the technical requirements needed.

Rubber is a commodity that has future prospects are quite good, but still traded traditionally. Given rubber commodity business is a long term effort, it is a review of the outlook for commodities is very important, especially in terms of marketing. Some things are a commodity information concerning, among other rubber is on the development of demand and supply, the development of some countries producers and consumers of natural rubber, including a comparative advantage and competitiveness and development potential.

Empirically can be found that the formal institutional trading system farmers were initially obtaining a higher price section (Drajat, 1984 in Harris, 1998). However, in the subsequent development of the institutions show the performance of the less encouraging. Farmers tend to choose the path of the traditional trading system through middlemen, although in practice receiving portion smaller price.

The choice of the institution is often associated with strong emotional bond between the farmers and traders who formed historically by emphasizing to the adjacency or kinship. But the trend has also occurred in the area of new development projects smallholder rubber. According to Kamal (2009), farmers who market if the rubber material (bokar) to the auction market is only 43.33% and market to the traditional market that is equal to 57.67% of the total number of farmers.

Determining the choice of institutional alternative trading system bokar by rubber farmers affected by the characteristics of each alternative institutional and socio-economic characteristics of farmers. Hobbs (1997), shows that in addition to alternative institutional characteristics, social and economic characteristics of farmers and farming characteristics give real effect to the determination of institutional options trading system by farmer.

Smallholder rubber plantations have diversity in terms of socio-economic situation of farmers and business characteristics of the garden, for example, the experience of farmers in an effort to rubber gardens, formal education level of farmers, non-formal education, family size, family income and aspects related to the production of rubber plantation.

Theoretically there is not a stated relationship between socio-economic situation of farmers and farm business characteristics with institutional selection opportunities, but these variables thought to have close ties with the institutional options trading system bokar by farmers. Characteristics of individual farmers and farming could be an obstacle to farmers in an effort to obtain the benefits that may be obtained from any institutional alternative trading system provided. The purpose of this research is to study the role of the characteristics of rubber farmers in the establishment of institutional options trading system.

II. RESEARCH METHODS

This research was conducted at the site of smallholder rubber plantations in West Aceh and East Aceh, which was conducted in February and September 2012. The study was conducted by survey conducted in 18 villages in six districts and two counties. Selection of the location of the village is done deliberately (purposively) with the consideration that the locations have an institutional bokar studied business administration. The sample in this study

is the rubber farmers were selected randomly inThe data collected in this study included primary data and secondary data.

The primary data collection is done by observation and structured interviews with a number of key informants ?? ?? and coupled with the implementation of the Forum Group Discussion (FGD) to strengthen and complete the required information. In addition, secondary data collection is done by studying reports relevant parties to strengthen the various information obtained from the primary data.

The next process, the data obtained from interviews with a number of respondents were tabulated. Variables studied the characteristics of rubber farmers in this study include the experience of farmers in the rubber plantation business, farmers' level of formal education, non-formal education, family size, family income and aspects related to the production of rubber plantation. Study characteristics Aceh rubber farmers in determining the choice of institutional trading system were analyzed using multinomial logit model. The equation is as follows:

$$\text{Log } P1 / P2 = \alpha_{12} + \beta_{12}X_{1i} + \gamma_{12}X_{2i} + + + \delta_{12}X_{5i} + \sigma_{12}X_{4i} + \theta_{12}X_{3i} + + + e_i + \zeta_{12}X_{6i}$$

III. RESULTS AND DISCUSSION

3.1. Institutional Structure Trading System Bokar

1. *Institutional Traditional*

Traditional institutions in the marketing system is an institutional bokar has long been grown in the centers of Rubber production. This institutional evolves with smallholder rubber plantations. In this institutional traders perantra plays a very dominant. The centers, which are located Rubber production up to remote rural villages connected by middlemen with processing centers are generally located in urban areas where the infrastructure exports. Between the processing center with remote production centers bokar formed a hierarchy of collectors village merchants, merchant district level, district level merchants and finally arrived at the processing plant.

In bokar marketing system, originally known simply institutional, so that 100% bokar produced by farmers can be said to be transacted through these institutions. Another recent institutional trading system emerged after the development projects smallholder rubber. Until now, traditional institutions still have a dominant role in business administration bokar in Aceh.

Bokar traditional institutions in the trading system has undergone many shifts, both in terms of the relationship between farmers and merchants with transaction practices. In the relatively remote location by means of communication and transportation are still limited, usually only one or two traders bokar the transaction. Traders in general also has other businesses such as provision of basic goods so in general have more economic power than the whole village community.

This the relationship between traders and farmers are not limited to bokar transactions, but also related to basic needs and loans money when farmers need. In effect the transactions that occur simultaneously are an attempt to minimize transaction costs and at the same time minimize the risk for both parties to a transaction.

The nature of the rubber production is strongly influenced by climatic conditions at the time of a particular cause farmers simply can not tap so it does not generate revenue. In such circumstances, the farmers would rely bokar necessities of life to the merchant, either in the form of basic necessities as well as a loan of money. In return for the assistance of farmers will sell the entire bokar produced to the merchants to form an informal bond of mutual benefit between the two sides in the form of principal-agent relationship.

Always there is a presumption that the price set traders are very low, so farmers harmed. But traders as agents are also at risk, for example in the form of the possibility of no return of loans given to small farmers, although this percentage. On the other hand the farmers as the principal did not seem to solely look at bokar price to be received, but the ease of the procedure to get help in time of need as well as the safety factor of the sustainability of life, so that in such circumstances both sides feel the benefits of this form of the relationship.

In further developments where infrastructure and facilities are relatively good, traditional institutions still have a dominant role. In such conditions, competition among traders bokar as increasing agents represented by the smaller index Herfindal thereby leading to more favorable conditions of farmers (Harris et al.1998). farmers no longer associated with one or two traders, but with many traders, both from inside and outside the village concerned. Forms principal-agent between farmers and traders remain intertwined but rather temporary, because the farmer can move from one trader to another trader who supposedly more profitable farmers. Bokar on institutional transaction period is one week following the dynamics of the rural economy that has been established. In the region of Aceh, uroe pekan (market) village every week has a significant role in rural economic activities mainly in the transaction basic needs of society. Bokar transactions between farmers and traders have always done one day before the day of the market (uroepekan) by way of a cash payment. So farmers can spend the proceeds bokarnya to meet daily needs.

Traditional institutions in bokar trade system has only two main actors namely farmers and traders. Merchants who perform transactions in a region of the village comes from the village which has had quite a lot of information about the character of farmers and bokar produced by farmers. Merchants who came from outside the village are usually classified as wholesalers who already have a relationship with processing plants and has had its own means of transport, so that mobility is quite high. Assessment of the quality bokar traders made for each individual farmer. This means not going relationship between farmers in the transaction process bokar. The low quality of the resulting bokar the farmers will not affect the transaction process bokar from other farmers. Another case in which a group of marketing system of quality assessment based on quality bokarnya bokar group.

Forms of principal-agent relationship between farmers and traders are strong enough. Although there are quite a lot of options traders, farmers do not easily switch from one trader to another trader, what often happens is the process of renegotiation between farmers and market traders, if there ketidakcocok \ an price. If the farmer gets the price information on

other merchants bokar higher, usually this information is passed to the merchant as his agent, then through negotiations and formed a new deal price.

The rights and obligations of farmers as principal and as agent in institutional traders traditional trading system is not explicitly written in a form of the agreement, either in the process or in the form bokar transaction other transaction. The rules are the rights and obligations of producers and traders are extensively knowledge already known and agreed and became a common consensus although there are slight variations between the locations of centers of production. This institution does not have a specific standard of quality bokar in the transaction. Quality assessment is based on visual observations only. Traders generally already have quality standards as a benchmark to determine the price bokar.

Transactions other than bokar between farmers and traders are in the form of a loan of money. This loan bears no interest and is given to farmers who need the procedure is very simple, both in number, mortgage loan repayment or its availability when needed, despite the necessary middle of the night. When farmers have had to borrow money, morally bokarnya farmers will sell to traders who lend the money. Bokar prices are set by dealers and, if there is little difference in price with other merchants, farmers generally do not accept it and there is a tendency to move to other merchants on the next transaction. Maximum limit of the price difference that can still be received by farmers is around Rp. 10-30, - / kg bokar.

The existence of competition between traders to get bokar from farmers to encourage traders to improve services to farmers purchases. Most farmers (75%) of the study sites except Bayeun Bireuen village, doing transactions with the merchant bokar residence farmers, even in the village of Alue Batee some traders make transactions in the garden bokar farmers. Traders typically use the existing conveyance and weighing bokar from house to house. The implication is that farmers obtain facilities and free of charge bokar transport from the storage place of sale. In contrast to the merchants, gathering bokar a burden to be a component of marketing costs.

In traditional institutional trading system, which has a fixed price information is traders, because it is they who have access to price information that is generally sourced from the mill as an exporter. However, because many traders then pretty much anyway pricing information obtained by farmers. Farmers can negotiate the transaction price bokar if you feel fit, and determine the amount of stale pieces. The rights and obligations that bind farmers and traders in a transaction made entirely on the basis of an informal agreement. Therefore, norms and local knowledge plays an important role as controller implementation of the enforcement of rights and obligations.

2. *Institutional Partners*

Bokar transactions carried out four times in one month. Transactions take place every Wednesday for East Aceh district of Aceh Barat district while to apply every Monday and Tuesday. The transaction occurred in the house of the head of the group, so that each member should bring bokarnya to house the group's chairman. After all bokar collected and then the board brought it to a processing facility in Medan, North Sumatra. Transactions bokar price set by the company, whereas the position of farmers only as recipients seller price (price takers). Parties which become the main actors in the transaction process is farmers farming

group. Marketing is organized as well as through community partnerships prevailing institutional quality standardization. It is important to remember not to do a quality assessment bokar per individu farmers, but the value in the group as a whole becomes a kind of quality and become a kind of selling price.

3.2. Institutional options trading system Rubber Farmers

The results of the analysis of institutional options trading system bokar by farmers are presented in Table 1, further emphasis on the discussion of institutional options odds comparison partnership (P1) against the traditional institutions (P2). Institutional partnership is a formal organized institutional forms with different characteristics. While traditional institutions is an established institutional presence.

Table 1. Alleged Multinomial Logit Function Coefficients Institutional Options Trading System Bokar

No.	FREE Variabel	Variabel Comparison Opportunities Log (P1/P2)
1	Constant	1.526
2	Experience in rubber farming	-0,024**
3	Formal Education	-0,418**
4	Formal Education	0,044
5	Number of family members	-0,322**
6	Total Family Income	o,236***
7	Number of rubbers trees that can tapped	-0,002***

Note: ***: Values t real at $\alpha = 0.01$

** : T real value at $\alpha = 0.05$

*: T real value at $\alpha = 0.10$

The analysis showed that the odds of institutional partnerships to traditional institutions (P1 / P2) selected farmers significantly affected by all variables characteristic of farmers were included in the analysis of the experience in rubber farming, formal education, non formal education, number of family members, total family income and the amount of rubber trees that can be tapped.

Increased experience of farmers in rubber farming tends to minimize opportunities for farmers to choose institutional partnerships. Opportunities institutional partnership is negatively affected by variable experience in rubber farming. It can be understood that the longer farmers have experience in farming tends to have keterkaitan more closely with merchants bokar compared to farmers who have relatively recent experience in rubber farming.

Tradersbokar with farmers in rural smallholder rubber centers usually have a hereditary ties. Farmers who have long subscribed to their parents usually automatically be subscribed merchant successor. Thus formed a strong attachment because as explained previously that merchant relationship with farmers usually not limited bokar transactions but also on the types of loans as loans of money.

This relationship evolved into a form of attachment morally and for the treatment of farmers merchants like this very useful because it can get the necessary assistance in time of need. As with the farmers who are relatively new in the usahatni rubber. They are more likely to choose the institutional partnership of the traditional institutional traders.

The amount of institutional options partnership opportunities than traditional institutions are also influenced by a variable number of family members. The greater the number of family members, the chances of farmers to choose the smaller institutional partnerships. These variables related to the level of expenditure as well as the uncertainty of expenditures. Such circumstances encourage farmers dealing with merchants bokar. It occurs mainly in large families whose children are many who are in school age. In such conditions occur that are abrupt and needs can not be adequately addressed by institutional partnerships. Limitations of service that can be provided by the farmer to farmer group members encourage farmers prefer traders who have high flexibility in transaction procedures.

The amount of institutional partnership opportunities with traditional kelembaganan negatively affected by the level of real and formal education. This indicates that farmers with higher formal education, tend to prefer the traditional institutional compared with institutional partnerships. It is caused by increasing farmers' knowledge in the transaction process bokar, so the ability to negotiate with merchants will be stronger than the farmers who have lower formal education.

Non-formal education in the field of rubber farming farmers obtained through various courses turned out to significantly affect the amount of institutional partnership opportunities compared to traditional institutions. Farmers who have attended more courses rubber farming tend to favor institutional partnerships compared to traditional institutions. This is due to the relationship level of awareness of farmers on quality improvement bokar. Bokar quality improvement on the traditional institutional difficult for both farmers and traders do not get enough of an incentive to do so.

Comparison of institutional partnerships with traditional opportunities are also influenced by the large number of family income. The higher the family income the greater the chances of farmers to choose institutional partnerships. the greater the income level of farmers, farmers' opportunities to conduct transactions with merchants bokar decreased, because the family needs can be met relatively more.

Further institutional partnership opportunities compared to traditional institutional negatively affected by the amount of rubber trees are tapped by farmers. This is because farmers who own that has a number of rubber trees Yag more likely to implement a system for managing results in rubber farming. Elasticity partnership opportunities institutional options have negative elasticity of the variables experience of farmers in rubber farming, farmer formal education, number of family members and the number of rubber trees are tapped. While the variable non-formal education and the number of family income elasticity

is positive. Elasticity response of the variable total family income is elastic with elasticity of 1.3. This means that if there is an increase of 1 unit the number of family income will increase the chances of farmers to choose institutional partnerships by 1.3%. While the other variables are not elastic because its value is below 1.

IV. CONCLUSION

The magnitude of the opportunities farmers to choose the institutional partnership of the traditional institutions is significantly affected by the negative direction by the experience of farmers in rubber farming, formal education of farmers, number of family members of farmers and the amount of rubber trees are tapped and influenced significantly and positively by non-formal education and total family income, Variables total family income elasticity response is elastic.

REFERENCES

- Angkasa Wisman Indra, Bambang Risdianto, Kasman. 2003. Pengkajian Mekanisme Difusi Teknologi Tepat Guna Pertanian. *Prosiding Seminar*. Teknologi untuk Negeri 2003, Vol. V, hal. 140 - 155 /HUMAS-BPPT/ANY
- Arifin, A. 1994. *Strategi Komunikasi*. Sebuah Pengantar Ringkas. Armico. Bandung.
- Badan Pusat Statistik Provinsi Nanggroe Aceh Darussalam, 2010, Aceh dalam Angka 2009. Kerjasama Badan Pusat Statistik NAD dan Bapeda NAD, 197 – 207.
- Balai Pengkajian Teknologi Pertanian NAD, 2009. *Pengelolaan Terpadu Padi Sawah untuk Meningkatkan Produktivitas Padi di Provinsi Aceh*. Makalah disampaikan pada seminar sehari Fakultas Pertanian Universitas Syiah Kuala.
- Kasryno F, dan N. Syafa'at. 2000. *Strategi Pembangunan Pertanian yang Berorientasi Pemerataan di Tingkat Petani, Sektor dan Wilayah*. *Prosiding Perspektif Pembangunan Pertanian dan Pedesaan dalam Era Otonomi Daerah*. Puslit Sosial Ekonomi Pertanian, Badan Litbang Pertanian, Departemen Pertanian, Jakarta. 397 hlm.
- Mulyani Eko Sri, Retno Sri Hartati Mulyandari, dan Penny I. Iskak. 2006. Pengkajian Penyampaian Inovasi Pertanian Melalui Pameran Di Kalimantan Barat. *Jurnal Perpustakaan Pertanian*. 15, (2) : 23-31.
- Nazari, M, 1996. Analisis Efisiensi Pemasaran Karet di Kabupaten Musi Rawas Sumatera Selatan. *Tesis*. S2 Universitas Brawijaya (unpublished), Malang.
- Nazir, M. 1988. *Metode Penelitian*. Ghalia Indonesia, Jakarta.

Pitaloka Dyah, Ani S.S. dan Jeffry. *Penyempurnaan Tata Laksana Penyiapan Dan Penerapan Paket Teknologi Pertanian (Revisi Keputusan Menteri Pertanian No. 804/1995)*. 2005.

Simatupang, P. 2004. Prima Tani sebagai Langkah Awal Pengembangan Sistem dan Usaha Agribisnis Industrial. *Analisis Kebijakan Pertanian*.2(3): 209-225.

Yuprin A.D.2009. Analisis Pemasaran Karet Di Kabupaten Kapuas. *Jurnal.WACANA* Vol. 12 No. 3. Bogor.