

INSTITUTIONAL PERFORMANCE ANALYSIS OF UPPB ON RUBBER TRADE SYSTEM IN SOUTH SUMATRA, INDONESIA

by Sriati Sriati

Submission date: 14-Jun-2023 04:28PM (UTC+0700)

Submission ID: 2115852684

File name: 16_institutional_performance,,_novayanti_dkk.pdf (251.36K)

Word count: 2309

Character count: 11829

DOI <https://doi.org/10.18551/rjoas.2017-02.13>

INSTITUTIONAL PERFORMANCE ANALYSIS OF UPPB ON RUBBER TRADE SYSTEM IN SOUTH SUMATRA, INDONESIA

Novayanti*

Agricultural and Food Security Agency, Palembang, Indonesia

Sriati, Yamin, Amruzi Minha

²Faculty of Agriculture, University of Sriwijaya, Indonesia

*E-mail: novayantikushartoyo@yahoo.com

ABSTRACT

A study of the institutional performance of Natural Rubber Processing and Marketing Unit (*Unit Pengolahan dan Pemasaran Bokar* or UPPB) on rubber trade system in South Sumatra. The purpose of this study is to analyze the institutional performance of UPPB on rubber business administration in South Sumatra. The institutional performance of UPPB on rubber marketing in South Sumatra is influenced by the characteristics of its farmers, institution, institution leadership, values, and local government (autonomy implementation). While on the other hand, the physical and social environment of the farmers, institution leadership, and social institution do not affect the institutional performance of UPPB. In addition to that, the institutional performance of UPPB has certainly affected the welfare of the farmers. If the institutional performance is increasing, the welfare of the farmers will be improved too (vice versa).

KEY WORDS

UPPB, institutional performance, trade system, rubber marketing.

Indonesia is one of the countries which has a fairly extensive rubber plantation. Based on the data from Indonesian Plantation Research Center, an approximately 85,17% of about 3,5 million hectares' area of rubber plantation is the people's plantation in which it involves 2,093,803 farmers. Another thing about this fact is that the area of people's rubber plantation has increased by 1,78% in the last 10 years.

Based on a review of *Bank Indonesia* (The Indonesian Bank), not only as a source of foreign exchange revenue, rubber industry is also a source of employment in which 53,4% of South Sumatra's population work in the agriculture sector, especially the rubber business. However, the contribution of rubber in the economy tends to be down as a result of a decreased rubber commodity export due to a lower commodity price. Of the average total rubber export in Sumatra per year, the value of the loss has reached between the price of \$364,78 per year. This was caused by the rubber price in Indonesia that was happened to be the lowest compared to other countries because of its low quality. With the decreased rubber commodity export and price, this made farmers' welfare to be dropped in which it was reflected in the fall of NTP (*Nilai Tukar Petani* or Farmers' Exchange Rate).

Historically, in the natural rubber trade system, an institutional system that regulates the interaction between actors in natural rubber marketing system has been formed naturally. Rubber farmers sell their product to the peasants who are generally own a convenience store or smokehouse. The relationship between peasants with farmers is formed in an institution in the form of agreement (rules) that regulates not only limited to the transactions of natural rubber but also in terms of farmers' basic needs. Based on the author's observation, the trade system of natural rubber in South Sumatra shows a very complex structure and directed to oligopsonistic market.

In the regulation of the Minister of Agriculture number 38 article 16 of 2008, it is stated that in term of natural rubber processing and marketing activities, the farmers are being grouped in UPPB (Natural Rubber Processing and Marketing Unit or *Unit Pengolahan dan*

Pemasaran Bokar); there are 8 regencies/cities in South Sumatra which have UPPB. The total UPPB in South Sumatra is as much as 72 UPPB, however, there are only 7 regencies/cities in South Sumatra which have a registered UPPB (precisely, there are 71 registered UPPB). In correlation with that, this study aims to analyze the institutional performance of UPPB on natural rubber business administration in South Sumatra.

LITERATURE REVIEW

The term institutional includes two important demarcation, such as (1) norms and conventions, and (2) rules of the game. Sometimes, an institutional is formally written and enforced by government officials, but it also can be written informally due to the rules and norms which are adopted by society. So, an institution can be defined as collective activities in a control or jurisdiction, deliverance or liberation, and expansion of individual activities as mentioned above (Arifin, 2005).

Seen from the formation process, there are two forms of institutions, namely an institution which grows naturally and an institution which is constituted deliberately based on the purpose of development (Saptana, 2006). While according to Anindita (2004), an institutional trading system covers a wide range of business organization which is build to run a marketing system.

The Regulation of the Minister of Agriculture number 38/The Regulation of the Minister of Agriculture/OT.140/2008 regarding Guidelines for Natural Rubber Processing and Marketing is stipulated by the Minister of Agriculture on August 12, 2008, in which it consisted of 6 chapters and 39 articles. The scope of this regulation covers; Processing, Institutional, Marketing, Development, and Supervision. By that, in order to improve the economy scale in processing and marketing the enterprises, an institution of Natural Rubber Processing and Marketing Unit (UPPB) is established.

The performance or outcome in an institutional system is the result of a complex process that is influenced by various factors. (Ostrom, 2006).

RESEARCH METHODOLOGY

This study was conducted from September until December 2016 in South Sumatra Province as one of the largest rubber producers in Indonesia. The 7 districts/cities which were chosen to be the focus of this research were Ogan Ilir (OI), Muara Enim, Prabumulih, Ogan Komering Ilir (OKI), Ogan Komering Ulu, Ogan Komering Ulu Timur (OKUT), and Banyuasin. Those areas became the focus of this research not only by the fact that these 7 districts/cities were the center of rubber producers in South Sumatra but also that they had the institutional form of the rubber trade system in the registered UPPB and other agencies such as cooperatives and farmers' group. The selection of the seven locations was done intentionally (purposive) because each district/city has an institutional form of rubber trade system with the above provisions.

Furthermore, survey method and literature will be used as an object of study. In this study, survey method was limited by observing the phenomenon with the survey sample, data, and information from a group of respondents as a representative embodiment of the study object.

Moreover, the data used in this study were primary data and secondary data. Primary data was taken from respondents through interviews by using a structured questionnaire and in-depth interviews with several selected respondents. The source of primary data was not only from the employee of the registered UPPB and other institutions such as cooperatives and farmers' group but also from the rubber farmers in the local area of Ogan Ilir (OI), Muara Enim, Prabumulih, Ogan Komering Ilir (OKI), Ogan Komering Ulu, Ogan Komering Ulu Timur (OKUT), and Banyuasin. Meanwhile, the secondary data was obtained from various sources such as annual reports of district/city evaluation and relevant research literature.

The samples or subsets of this research were the institution of rubber trade system and farmers' in rubber production center districts/cities that have the registered UPPB and other

institutions such as cooperatives and farmers' group. In this study, there would be an assessment of the phenomenon of institutional performance on rubber trade system in South Sumatra and also an evaluation of the dimensions and interrelations by using SEM (Structural Equation Model) technique.

Based on the population distribution in each layer, the percentage that was used in the sampling was adapted to the number of the population so that it would be a representative of scientific principles. In all layers of samples, only 30% of the sample would be taken due to the fact that the population was < 1000. The sampling of this study was carried out with probability, which was a stratified random sampling. On the other hand, the amount of the samples which was taken in each stratum was based on a proportionate stratified random sampling. From 7 population, there would be 4 targeted population; the population was then divided into 2 strata based on the existence of registered UPPB and other institutions, namely:

The data processing and analysis which require the help of statistical tools was carried out by using descriptive statistics and inferential statistics. Besides that, the value of t_{count} compared with the value of t_{table} was used to know the difference between the mean of each variable in the 2 groups of samples. This means if $t_{arithmetic} \leq t_{table}$, then, there was a difference in between the mean. Meanwhile, when $t_{count} > t_{table}$, then, there would be no difference between the mean of the samples that was tested at a significance level of $p < 0.05$ ($\alpha = 0.95$) or $p < 0.01$ ($\alpha = 0.99$).

RESULTS AND DISCUSSION

Table 1 – The Best Output Outer Model, AVE and Composite Reliability

Outer Loadings

	X1	X2	X3	X4
X110	0.800968			
X13	0.845960			
X23		1.000000		
X33			0.560991	
X36			0.863683	
X42				0.996880
X43				0.639998
	X5	X6	X7	Y1
X51	1.000000			
X61		0.920491		
X62		0.766646		
X72			1.000000	
Y110				0.790442
Y111				0.524613
Y12				0.529105
Y14				0.695794
Y15				0.774771
Y16				0.700107
Y18				0.617680

AVE

	AVE
X1	0.678599
X2	1.000000
X3	0.530330
X4	0.701684
X5	1.000000
X6	0.717525
X7	1.000000
Y1	0.448007

Composite Reliability

	Composite Reliability
X1	0.808415
X2	1.000000
X3	0.683621
X4	0.817878
X5	1.000000
X6	0.834393
X7	1.000000
Y1	0.847420

From the table above, the evaluation of outer model includes:

The value of outer loading is a measurement model coefficient which measures the construct validity of the PLS model. The value of this outer loading is considered valid when it is > 0,5. From the results of the output, as we can see above, all outer loading values are valid.

Average variance extracted (AVE) is the average of the outer loading variance which quantifies the construct validity of the PLS model. The value of AVE shows a valid (accurate) model when it is > 0,5. So, from the table, there is 1 invalid AVE which is the Y1 construct.

The value of composite reliability (CR) is a coefficient that determines a construct reliability of the PLS model. CR value is seen as a reliable (trustworthy) model when the CR is > 0,7. By that, we can conclude that 1 CR is not reliable (X3 construct). Due to the good values of outer loading, the value of AVE in Y1 construct and CR in X3 construct can be tolerated in order to protect the indicator of Y111, Y12, and X33 which are already valid.

Table 2 – Output Inner Model: R Square and Path Coefficients

R Square		Path Coefficients				
	R Square		X5	X6	X7	Y1
X1		X1				0.204898
X2		X2				0.069346
X3		X3				0.226750
X4		X4				0.286699
X5		X5				0.125333
X6		X6				0.360715
X7		X7				0.023142
Y1	0.478040	Y1				

Significance test (t-test) for Path Coefficients is not succeeded, so, the bootstrapping method is given with this following results:

Table 3 – Output Inner Model with *Bootstrapping*: Path Coefficients (Mean, STDEV and T-Values)

Path Coefficients (Mean, STDEV, T-Values)					T Statistics (O/STERR)	
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)		
X1 -> Y1	0.204898	0.205236	0.080941	0.080941	X1 -> Y1	2.531450
X2 -> Y1	0.069346	0.074293	0.104666	0.104666	X2 -> Y1	0.662548
X3 -> Y1	0.226750	0.217844	0.102080	0.102080	X3 -> Y1	2.221307
X4 -> Y1	0.286699	0.278687	0.107539	0.107539	X4 -> Y1	2.665997
X5 -> Y1	0.125333	0.117334	0.085001	0.085001	X5 -> Y1	1.474477
X6 -> Y1	0.360715	0.379582	0.133378	0.133378	X6 -> Y1	2.704457
X7 -> Y1	0.023142	0.020385	0.111595	0.111595	X7 -> Y1	0.207375

Outer evaluation model (measurement model), includes:

The value of outer loading is a coefficient which measures the construct validity of the PLS model. The value of this outer loading is considered valid when it is > 0,5. So, from the results, the values of valid outer loading are given in Table 4.

Average variance extracted (AVE) is the average of the outer loading variance which quantifies the construct validity of the PLS model. The value of AVE shows a valid (accurate) model when it is > 0,5. From the results of the output, all AVE values are valid.

The value of composite reliability (CR) is a coefficient that determines a construct reliability of the PLS model. CR value can be said as a reliable (trustworthy) model when the CR is > 0,7. As we can see from the output, all CR are reliable. Then, here is the summary of AVE and CR (Table 5).

The evaluation of inner model (structural model) is the path coefficients which measure the influence of the constructs. In order to test the path coefficients with t-test, the following hypothesis is given:

- a. H₀: No partial effect (X1, X2, X3, X4, X5, X6, and X7 to Y1).
- b. H₁: No partial effect (X1, X2, X3, X4, X5, X6, and X7 to Y1).

Table 4 – The value of outer loading with SEM-PLS UPPB

Construct	Indicator	Loading
X1	X110	0,800968
	X13	0,845960
X2	X23	1,000000
X3	X33	0,560991
	X36	0,863683
X4	X42	0,996880
	X43	0,639998
X5	X51	1,000000
X6	X61	0,920491
	X62	0,766646
X7	X72	1,000000
Y1	Y111	0,790442
	Y110	0,524613
	Y12	0,529105
	Y14	0,695794
	Y15	0,774771
	Y16	0,700107
	Y18	0,617680

Table 5 – The value of AVE and CR with SEM-PLS UPPB

Construct	AVE	CR
X1	0,678599	0,808415
X2	1,000000	1,000000
X3	0,530330	0,683621
X4	0,701684	0,817878
X5	1,000000	1,000000
X6	0,717525	0,834393
X7	1,000000	1,000000
Y1	0,448007	0,847420

In this t-test, the value of path coefficients is said to be statistically significant if the value of $|t\text{-value}| \geq t_{\alpha/2, \nu}$. From here, a calculation of $\alpha/2 = 0,05/2 = 0,025$ dan $\nu = n - p = 144 - (18 + 7) = 199$ is generated, so that the value of t_{table} or $t_{\alpha/2, \nu} = t_{0,025, 199} = 1,9719$ (approach value on $\nu = 200$).

CONCLUSION

The institutional performance of UPPB on natural rubber trade system in South Sumatra is influenced by the characteristics of the farmers, institution, institution leadership, values, and local government (autonomy implementation). While on the other hand, the physical and social environment of the farmers, institution leadership, and social institution do not have any effect on the institutional performance of UPPB.

Besides that, the institutional performance of UPPB could affect the welfare of the farmers. When institutional performance is increased, the welfare of the farmers will also be enhanced, vice versa.

REFERENCES

1. Arifin, Z. (2005). Teori Keuangan dan Pasar Modal. Ekonisia. Yogyakarta.
2. Anindita, R. (2004). Pemasaran Hasil Pertanian. Papyrus, Surabaya.
3. Saptana. 2006. Analisis Kelembagaan dan Kemitraan Usaha di sentra Produksi sayuran. Pusat Penelitian dan Pengembangan Sosial Ekonomi Pertanian.
4. Ostrom, E. and Nagendra, H. 2006. Understanding Institutional Diversity. Princenton University Press. USA.
5. Peraturan Menteri Pertanian No.38/Permentan/OT.140/8/2008 tentang Pedoman Pengolahan dan Pemasaran Bahan Olah Karet.

INSTITUTIONAL PERFORMANCE ANALYSIS OF UPPB ON RUBBER TRADE SYSTEM IN SOUTH SUMATRA, INDONESIA

ORIGINALITY REPORT

13%

SIMILARITY INDEX

12%

INTERNET SOURCES

2%

PUBLICATIONS

2%

STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

8%

★ www.bajangjournal.com

Internet Source

Exclude quotes On

Exclude matches < 1%

Exclude bibliography On