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UPPB INSTITUTIONAL PERFORMANCE ANALYSIS ON RUBBER TRADING SYSTEM IN SOUTH SUMATERA

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ABSTRACT

Analysis of the institutional performance of the Bokar Processing and Marketing Unit (UPPB) in the rubber trading system in South Sumatra. The purpose of this study was to analyze the institutional performance of UPPB in the rubber trading system in South Sumatra. UPPB's institutional performance on the rubber trading system in South Sumatra is influenced by the characteristics of farmers, institutional characteristics, institutional leadership, values, and governance (autonomy of administration) of the local government. Meanwhile, the physical and social environment of farmers, institutional leadership and social organization did not affect the institutional performance of UPPB. In addition, the institutional performance of UPPB affects the level of farmers' welfare. When institutional performance increases, the level of farmer welfare also increases and vice versa.

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1. INTRODUCTION

Indonesia is a country that has a large area of rubber plantations. Based on data from the Center for Plantation Research (2021), of the approximately 3.5 million hectares of rubber land, around 85.17% is community plantations and involves 2,093,803 farmer households (KK). The area of smallholder rubber plantations has increased by 1.78% in the last 10 years.

Based on a study by Bank Indonesia (2020), apart from being a source of foreign exchange earnings, the rubber commodity is also a source of employment where 53.4% of the population of South Sumatra work in the agricultural sector, especially rubber. However, the contribution of rubber to the economy tends to decline due to the decline in exports of rubber commodities in line with falling commodity prices. Of the total average Sumatran rubber exports per year, the value of the loss from the price difference reaches $ 364.78 million per year. This is caused by the lowest rubber price from Indonesia compared to other countries due to the low quality of rubber. With the decline in rubber exports and low rubber prices at the farmer's level, the welfare of farmers has decreased, which is reflected in the decrease in NTP (Farmers Exchange Rate).

Historically, it appears that in the bokar trading system, an institutional system has naturally been formed which regulates interactions between actors in the bokar marketing system. Farmers sell their rubber to village-level traders who are generally also staple traders or smokehouse owners. The relationship between farmers and traders at the village level is formed in an institution in the form of mutually agreed rules that govern not only bokar transactions but also in terms of the basic needs of farmers. Based on the author's observation, the smallholder rubber trading system in South Sumatra shows a very complex structure and leads to an oligopsonistic market form.

In the Regulation of the Minister of Agriculture No.38 of 2008 Article 16 it is stated that for bokar processing and marketing activities, planters are grouped in UPPB (Bokar Processing and Marketing Unit). There are 8 Regencies/Cities in South Sumatra that have UPPB. The number of UPPB in South Sumatra is 72 UPPB. However, of

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this number, only 7 regencies/cities in South Sumatra have registered UPPBs, to be exact, 71 registered UPPBs. This study aims to analyze UPPB institutional performance in the rubber trading system in South Sumatra.

2. RESEARCH METHOD

This research was carried out in January 2022 in the Province of South Sumatra, considering that South Sumatra is one of the largest rubber producing provinces in Indonesia. The seven regencies/cities that will be the focus of the research location are Ogan Ilir (OI), Muara Enim, Prabumulih, Ogan Komering Ilir (OKI), Ogan Komering Ulu, Ogan Komering Ulu Timur (OKUT) and Banyuasin with the reasons that the seven regencies/cities besides as a center for rubber producers in South Sumatra also because the seven regencies/cities have rubber trade administration institutions in the form of a registered UPPB and other institutions such as KUD and or cooperatives and or Gapoktan. The selection of the seven locations was carried out purposively because each of these regencies/cities has a rubber trade administration institution with the provisions mentioned above.

In this study, survey methods and literature studies will be used as the object of study. The survey method is limited to sample surveys, namely observing phenomena with data and information from a group of respondents as a representative embodiment of the object under study.

3. RESULTS AND ANALYSIS

The sample or subset in this study is the Institute of Commerce and rubber farmers in the region in the district / city rubber production centers that have registered UPPB and other institutions such as KUD and or cooperatives and or gapoktan. In this study will look at the various phenomena of institutional demonstration in the rubber trade system in South Sumatra province but it also looks at the dimensions and interrelations to be analyzed using SEM techniques (Structural Equation Model).

From the distribution of the population in each layer, the percentage used in sampling is adjusted to the number of members of the population to be representative in accordance with scientific rules. In all layers will be sampled as much as 30% considering the number of population < 1000. Sampling in this study was conducted probabilita, namely stratified random sampling. The amount of samples taken at each strata is done by a balanced method (proportionate stratified random sampling). From 7 population Taken 4 target population, where the fourth target population is divided into 2 strata based on the existence of UPPB registered and other institutions, namely:

Processing and analysis of data that require statistical testing tools performed using descriptive statistics and inferential statistics. Next, the value t hitung compared to the value t tabel to determine the difference between the sample mean of each variable in the two sample groups. When t hitung ≤ t tabel, then there is a difference between the sample mean. While when t hitung > t tabel, then there is no difference between the mean samples tested at the level of significance $p < 0,05$ ($\alpha = 0,95$) or $p < 0,01$ ($\alpha = 0,99$).

Table 1. Best outdoor model output, 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

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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 the outer model (measurement model), including :

1) The outer value generates the coefficient value of the measurement Model that measures the validity of the PLS model contract. The outer loading value applies when the outer loading is > 0.5. From the output, all outer loading values are valid.
2) The value of average variance extracted (AVE) is the average of the outer loading variance that measures the validity of the PLS model extract. Ave value indicates a valid (accurate) model when AVE > 0.5 . From the output, there is an invalid AVE value, namely: konstrak **Y1**.
3) The value of composite reliability (CR) is a coefficient that measures the reliability of the construction of PLS models. The CR value indicates a reliable model when CR > 0.7 . From the output, there is an AVE value that is not reliable, namely: konstrak **X3**.

Because all the outer loading values are good, the lack of Ave value on **Y1** and CR on **X3** is given tolerance on the grounds of maintaining **Y111**, **Y12**, and **X33** indicators that are valid.

Table 2. Output Inner Model: R Square dan Path Coefficients

R Square

	R Square
X1	
X2	
X3	
X4	
X5	
X6	
X7	
Y1	0.478040

Path Coefficients

	X5	X6	X7	Y1
X1				0.204898
X2				0.069346
X3				0.226750
X4				0.286699
X5				0.125333
X6				0.360715
X7				0.023142
Y1				

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Significance testing (t test) for Path Coefficients does not, so given a Bootstrapping method with the following results:

Table 3. Output Inner Model dengan *Bootstrapping*: Path Coefficients (Mean, STDEV dan T-Values)

Path Coefficients (Mean, STDEV, T-Values)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)
X1 -> Y1	0.204898	0.205236	0.080941	0.080941
X2 -> Y1	0.069346	0.074293	0.104666	0.104666
X3 -> Y1	0.226750	0.217844	0.102080	0.102080
X4 -> Y1	0.286699	0.278687	0.107539	0.107539
X5 -> Y1	0.125333	0.117334	0.085001	0.085001
X6 -> Y1	0.360715	0.379582	0.133378	0.133378
X7 -> Y1	0.023142	0.020385	0.111595	0.111595

	T Statistics (|O/STERR|)
X1 -> Y1	2.531450
X2 -> Y1	0.662548
X3 -> Y1	2.221307
X4 -> Y1	2.665997
X5 -> Y1	1.474477
X6 -> Y1	2.704457
X7 -> Y1	0.207375

Evaluasi *outer model* (measurement model), covering :

1) The outer loading value is the coefficient of measurement model that measures the validity of PLS model concentrate. The outer loading value is said to be valid when the outer loading is > 0.5 . From the output, a valid outer loading value is given as follows:

Table 4. Rated outer loading model SEM-PLS UPPB.

Konstrak	Indikator	*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

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2) The value of average variance extracted (AVE) is the average of the outer loading variance that measures the validity of the PLS model extract. Ave value indicates a valid (accurate) model when AVE > 0.5 . From the output, all AVE values are valid.
3) The value of composite reliability (CR) is a coefficient that measures the reliability of the construction of PLS models. The CR value indicates a reliable model when CR > 0.7 . From the output, all CR values are reliable. The following is a summary of AVE and CR values:

Table 5. AVE and CR values model SEM-PLS UPPB.

Konstrak	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

Evaluation of the inner model (structural model) is the value of path coefficients is a path coefficient that measures the influence between the konstrak-konstrak. To test the path coefficients with a given t test with the following hypothesis:

a. H_0 : There is no partial effect **X1**, **X2**, **X3**, **X4**, **X5**, **X6**, and **X7** against **Y1**.
b. H_1 : There is no partial effect **X1**, **X2**, **X3**, **X4**, **X5**, **X6**, and **X7** against **Y1**.

For t testing, the value of path coefficients is significant if the statistical value $|t\text{-}value| \geq t_{\alpha/2,v}$. Generated value calculations $\alpha/2 = 0{,}05/2 = 0{,}025$ and $v = n - p = 144 - (18 + 7) = 199$, so that the value of t-table or $t_{\alpha/2,v} = t_{0{,}025\ ,\ 119} =$ **1,9719** (the value of the approach $v = 200$).

Table 6. Correlation coefficient testing for UPPB data.

Institution Performance UPPB	Farmer Welfare UPPB	Correlation Coefficient	P value
Kinerja (Y_1)	Types of food acquisition ($Y_{2.1}$)	0.064	0.525
	Types of clothing acquisition ($Y_{2.2}$)	0.269*	0.000
	Types of procurement of Water Resources ($Y_{2.3}$)	-0.091	0.229
	Toilet facilities ($Y_{2.4}$)	0.259*	0.001
	Types of floors of residential buildings ($Y_{2.5}$)	0.209*	0.006
	Widest type of Wall ($Y_{2.6}$)	0.183*	0.016
	Residential area ($Y_{2.7}$)	0.188*	0.012
	Lighting source ($Y_{2.8}$)	0.413*	0.000
	Drinking water source ($Y_{2.9}$)	0.113	0.129
	Cooking fuel ($Y_{2.10}$)	0.384*	0.000
	Treatment Ability Level ($Y_{2.11}$)	0.257*	0.001
	Income Level ($Y_{2.12}$)	-0.004	0.961
	Savings ownership ($Y_{2.13}$)	-0.097	0.224
	Education Level ($Y_{2.14}$)	-0.118	0.120

* Significant for alpha (α) by 5%.

From the results of the correlation coefficient test, the test concluded that there is a significant relationship/positive correlation between the performance of UPPB institutions from the performance (Y_1) with the welfare of UPPB farmers, namely: type of clothing acquisition ($Y_{2.2}$), toilet facilities ($Y_{2.4}$), types of floors of residential buildings ($Y_{2.5}$), widest type of Wall ($Y_{2.6}$), area of the dwelling house ($Y_{2.7}$), source of illumination ($Y_{2.8}$), fuel for cooking ($Y_{2.10}$), and the level of medication affordability ($Y_{2.11}$). This means that the better the performance of institutions in managing their membership related to the processing and marketing of BOKAR, it affects the welfare of farmers with indicators of the type of clothing acquisition, facilities for defecating/WC, the type of floor of

residential buildings, the widest wall type, the area of residential houses, sources of lighting, fuel for cooking, and the level of treatment ability, all of which are getting better.

4. CONCLUSION

UPPB's institutional performance in the rubber trade system in South Sumatra is influenced by the characteristics of farmers, institutional characteristics, institutional leadership, values, and governance (autonomy) of local government. While the physical and social environment of farmers, institutional leadership and social organization do not affect the institutional performance of UPPB. In addition, UPPB institutional performance affects the welfare of farmers. When institutional performance increases, the level of welfare of farmers also increases and vice versa.

5. REFERENCES

[1] Armstrong, Michael. 2004. Performance Management (Tono Setiawan Translation). Tugu, Yogyakarta.
[2] Anwar, C. 2005. Indonesia's natural rubber prospects in the International Market: an analysis of Market Integration and export performance. Doctoral Dissertation. Graduate School, Bogor Agricultural University, Bogor
[3] Arifin, Zaenal. 2005. Theory of Finance and Capital Markets. Econisia. Yogyakarta.
[4] Anindita, R. 2004. Marketing Of Agricultural Products. Papyrus, Surrey.
[5] Canterbury, H. 2008. Analysis of the productivity level of old rubber plants in relation to household economic conditions and the readiness of planters to rejuvenate rubber plants in South Sumatra. Thesis. Agribusiness Study Program Graduate Program Of Sriwijaya University, Palembang.
[6] Department Of Agriculture. 2008. Regulation of the Minister of Agriculture No: 38 / Permentan / OT.140/8/2008 on guidelines for processing and marketing of rubber processing materials (BOKAR). Department Of Agriculture, Jakarta.
[7] Goddess, EP. 2007. Analysis of farmers ' income after rubber rejuvenation in Banyuasin District III Banyuasin Regency. Thesis. Agribusiness Study Program Graduate Program Of Sriwijaya University, Palembang.
[8] Directorate General of Agro and chemical industry. 2007. Overview Of The Rubber Industry At A Glance. Ministry Of Industry. Jakarta.
[9] International Rubber Study Group (IRSG). 2004a. Rubber Statistical Bulletin, 58 (12) and 59 (1) September/October 2004. International Rubber Study Group, Wembley, London.
[10] Intriligator, M.D. 1980. Econometric Models: Techniques and Applications. Prentice Hall, New Delhi, India.
[11] Jared, TJ. 2003. Rubber Optimum Replanting Analysis (Case Study in Landas Musi Garden South Sumatra). In Inherent Digital Library online: Available: http://i-lib.ugm.ac.id. Html (December 12, 2012)
[12] Ostrom, E., and H. Nagendra. 2006. Understanding Institutional Diversity. Princenton University Press. USA.
[13] Minister Of Agriculture Regulation No.38 / Permentan / OT.140/8/2008 on guidelines for processing and marketing of rubber materials.
[14] Saptana et al. 2006. Institutional analysis and business partnerships in vegetable production centers. Agricultural socio-economic research and Development Center.
[15] Sjarkowi, F. 2010. Agribusiness Development Management. Baldad Graffiti Press, Edition I. Palembang.
[16] Supriyati and R.Elizabeth. 2009. Farmer welfare and Agribusiness Development through the development of institutional partnerships in the marketing of Red Pepper. Case: partnership of PT. Heinz ABC Indonesia in Central Java.
[17] National Seminar Paper On Improving Agribusiness Competitiveness Oriented To Farmer Welfare. Bogor. October 14, 2009.
[18] Suradisastra, K. 2008. Farmer's Strategy. Agroeconomic Forum. Vol.26 (2). PSE-KP. Hal. 82-91.
[19] Suradisastra, K. 2006. Institutional revitalization to accelerate the development of the agricultural sector in regional autonomy. Journal Of Agricultural Policy Analysis. Vol.4 No.4. December 2006: P. 281-314.
[20] Syahza, A. 2010. Economic institutional Model on oil palm plantations in Riau province. Research Institute Of Riau University. Pekanbaru.
[21] Tanugraha, H. 1986. Inefficiency Perkaretan Indonesia. In Kompas Daily, November 19. PT Gramedia. Jakarta.
[22] Tety, Ermi. 2002. Supply and demand of Indonesian natural rubber in domestic and international markets. Thesis. Postgraduate Program: IPB.
[23] Team of authors PS. 2004. Rubber cultivation and processing marketing strategy, Self-Help spreader. Jakarta.
[24] Undri. 2004. Land ownership in West Sumatra in the 1950s (the case of land ownership conflict rubber plantations in Pasaman). Workshop on the Economic Side of Decolonosatioan. Gajah Mada University, Yogyakarta.

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[25] Wulandari, T. 1989. Determination of the Optimum time and pattern of rejuvenation of Plantation rubber plants. Department Of Agricultural Socio-Economic Sciences. Faculty Of Agriculture. Bogor Agricultural University. Bogor.
[26] Yamin, Sofyan and Heri Kurniawan. 2009. Structural Equation Modeling with Lisrel-PLS. Salemba Publishers. Jakarta.
[27] Yudiarini, K. Susanna, and NW. Sri Asti. 2014. The impact of Agribusiness Development on Subak on farmers ' Household Income (case in Subak Guama, Marga District, Tabanan Regency). Journal Of Agribusiness Management Vol. 2, No. 1, May 2014: 37-48
[28] Zakaria, W.A. 2008. Institutional Strengthening Of Farmer Groups Is The Key To Farmer Welfare. Faculty Of Agriculture, University Of Lampung.

International Journal of Social Science (IJSS)
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