ISSN : 1412-8837
e-ISSN : 2579-9959
JURNAL AGRISEP
Kajian Masalah Sosial Ekonomi Pertanian dan Agribisnis
DOI: 10.31186/jagrisep.22.1.129-152

FACTORS AFFECTING THE DECISION OF SMALLHOLDERS TEA FARMERS TO JOIN THE COOPERATIVE

Faktor-faktor Yang Mempengaruhi Keputusan Petani Teh Kebun Rakyat Bergabung Dalam Koperasi

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ABSTRACT

Cooperatives are suitable institutions to coordinate and manage the resources that owned by smallholders. To be sustainable, the formation of cooperatives must be based on individual awareness through collective action. To find out the most influencing factors for smallholder tea plantation farmers to join cooperatives, research was conducted on farmers who are members of the Eleven Jurai Saiyo Organic Tea Producers Cooperative which is abbreviated as KPTO-SJS. By using a quantitative descriptive method, the survey was conducted by snowball sampling to 30 members of the cooperative, then the data was analyzed using the SEM-PLS analysis tool with Confirmatory Factor Analysis. The results showed that all variables significantly affect the awareness of farmers to join the cooperative. However, the most influential factor is the knowledge factor with a path coefficient value of 0.576, followed by characteristics, social factors and economic factors. Because all variables have a positive influence on farmers' decisions to join cooperatives, an increase in each variable will have an effect on increasing the number of farmers joining cooperatives. So increasing farmers' knowledge is a must to improve farmers' ability to make decisions.

Keyword: cooperative, decision, smallhoder tea farmer, SEM-PLS

ABSTRAK

Koperasi adalah lembaga yang cocok untuk mengkoordinasikan dan mengelola sumberdaya yang dimiliki oleh petani kebun rakyat. Untuk dapat berkelanjutan, maka

pembentukan koperasi haruslah atas dasar kesadaran individu melalui aksi kolektif. Untuk mengetahui faktor yang paling mempengaruhi petani kebun teh rakyat bergabung dalam koperasi, penelitian dilakukan kepada petani yang tergabung dalam Koperasi Produsen Teh Organik Sebelas Jurai Saiyo yang disingkat dengan KPTO-SJS. Dengan menggunakan metode deskriptif kuantitatif, survey dilakukan secara snowball sampling kepada 99 orang anggota koperasi, kemudian data dianalisis menggunakan alat analisis SEM-PLS dengan Confirmatory Factor Analysis. Hasil penelitian menunjukkan bahwa seluruh variabel mempengaruhi secara signifikan kesadaran petani untuk bergabung dalam koperasi. Namun faktor yang paling berpengaruh adalah faktor pengetahuan dengan nilai koefisien jalur sebesar 0.576, kemudian diikuti oleh karakteristik, faktor sosial dan faktor ekonomi. Karena seluruh variabel memiliki pengaruh positif terhadap keputusan petani bergabung dalam koperasi, maka peningkatan pada setiap variabel akan memberikan pengaruh pada meningkatnya jumlah petani yang bergabung dalam koperasi.

Kata Kunci: koperasi, keputusan, teh rakyat, SEM-PLS

INTRODUCTION

Agribusiness development is an effort made to improve the condition of the agribusiness community in the future, the development is carried out to achieve changes in social, economic, policy, behavioral patterns and institutions of the agribusiness community (Purba et al., 2021; Digdowiseiso, 2020; Karmini, 2020; Willis, 2020). Agribusiness development is part of agricultural development in general, development which in the past and in the future is expected to have an impact on improving the welfare of rural communities, especially farmers (Gaffney et al., 2019; Sarma & Raha, 2017). It is a sustainable work that uses technology combined with the intelligence, imagination and hard work of farmers (Soekartawi, 2003). The effectiveness of these activities depends on how each actor involved cooperates with each other (Mosher, 1991). Because driving agricultural development is not only the work of farmers, but is an integral part of economic development and society in general, it is the result of the activities of farmers and their families, policy makers, scientists who produce new technology and science and also entrepreneurs who will provide network in a broad chain of activities in producing products and marketing (Mosher, 1991).

Competitive agribusiness is agribusiness that is able to respond to the market dynamics effectively and efficiently . Effective in terms of place, time and amount. Efficient means getting production inputs at low prices but with the same quality. For this reason, it is necessary to develop the role of interested groups in controlling the supply of the agribusiness system (Irawan, 2016). One form of a successful pattern that has a positive impact on

farmers' social behavior is that farmers sell their products to cooperatives compared to those who do not (Giuliani et al., 2017).

In Indonesia, cooperatives are used as the pillars of the economy (Itang, 2016), because according to the founders of the nation, the best thing to do for the development of the country is through cooperatives (Kahar & Susila, 2012; Suratman & Rusidi., 1992). This is because cooperatives are the most suitable legal entities for rural communities who generally operate in the agricultural sector (Susilo, 2013). Cooperatives are different from companies, because business ownership in cooperatives is with their members based on the amount of capital or savings in the cooperative, while in business companies, business ownership can be in one person or several people depending on the type of company (Altman, 2012). The difference is also in the method of profit sharing, in cooperatives profits will be distributed proportionally to each member according to the amount of capital and services they have(Cook & Burress, 2009; Hatta, 2018; Kahar & Susila, 2012; Yustika, 2013). This can affect an individual's decision to join a cooperative, because each individual is a rational being, where every action that will be taken aims to maximize the utility that will be obtained (Ostrom, 2014). Farmers' decisions to join cooperatives can be influenced by internal (individual characteristics/social identity) and external (social and economic) factors (Bravo-Monroy et al., 2016; Medina & dos Santos, 2017; Thomas et al., 2020). However, it is also necessary to know the most influential factors in farmers' decisions to join the cooperatives. Therefore, this research needs to be done to assess what factors most influence the decision of farmers to join cooperatives. The research was conducted at the Koperasi Produsen The Organik Sebelas Jurai Saiyo (KPTO-SJS) located in Solok Regency, West Sumatra Province.

KPTO-SJS produces organic tea products with premium quality named LUGU's Premium Tea. This tea is processed from tea shoots that were produced by smallholder tea farmers in Solok Regency. The smallholders tea plantation has been implemented since 1987 by PT. Nusantara VI Plantation in Gunung Talang District, Solok Regency. However, until 2007 the smallholders's tea plantation business had not been able to improve the level of farmers' welfare. So, in 2007 the development of organic tea was carried out in Solok Regency and planted as much as 150 ha in Nagari Aia Batuumbuak with an integrated organic tea plantation business management model starting in 2008 (KPTO, 2018). Until 2017 the number of farmers who joined the management of organic tea integration is increasing. Farmers who were previously tied to the bondage system then took back their tea gardens and joined the cooperative. Until 2020 the number of farmers who are members of the cooperative is 99 people. This cooperative succeeded in establishing collaboration with the government and the private sector to carry out the processing of organic tea products with export quality. This is very

interesting, because in conditions where trust in cooperatives has decreased due to disappointment with free rider activities in cooperative practices in the past, trust is the most important thing that must exist in the cooperative movement (Faedlulloh, 2015), meanwhile in this case the farmers are actually willing join the cooperative movement.

The cooperative movement in Indonesia began in 1896 conducted by Patih R. Aria Wiriatmaja who was inspired by the raiffeisen movement in Germany. The dynamics of cooperative development then continue to occur today with all the ups and downs of its movement(Faedlulloh, 2015). In the past, cooperative management was inseparable from government intervention, so that the principle of autonomy and independence from cooperatives could not be achieved, causing cooperatives not develop sustainably (Itang, 2016; Zain et al., 2015). The "Tungku Tigo Sajarangan" pattern that applied by the KPTO-SJS cooperative has a management pattern that is more centered on members so that it is expected to develop sustainability. Because cooperatives that are formed from below on individual awareness are one of the requirements for cooperatives to develop sustainably (Zain et al., 2015). However, it is not yet known what factors that affecting the farmers' decisions to join the cooperative movement. So, this research was conducted to look at the factors that affecting the farmers' decisions to join the cooperatives.

RESEARCH METHOD

This research was conducted at the Organic Tea Producers member of KPTO-SJS at Gunung Talang District, Solok Regency. This cooperative was chosen because it is a smallholder tea farmer cooperative that has succeeded in producing premium organic tea of export quality as evidenced by its fairtrade and selling premium quality tea of 156,091.3 kg or 156.09 tons until 2019. In addition, this cooperative is a cooperative that applies the concept of "Tungku Tigo Sajarangan" as a philosophy in cooperative operations involving farmers, companies/private sectors and the government. This research was conducted using a qualitative descriptive method, which surveyed to 30 members of the cooperative who selected by random sampling as a minimum limit for the number of samples with statistical measurements (Sugiyono, 2020) . In addition, interviews were also conducted with key informants for the chairman of the cooperative and one other cooperative management. The data collected is primary data collected using a list of interview questions and secondary data from various sources of required literature.

The variables in this study to identify the factors that influence the decision of farmers to join the cooperative are internal factors in the form of

farmer characteristics and farmer knowledge, external factors in the form of economic and social factors. The characteristics are consist of age, level of education, farming experiences, land area, and family numbers. The knowledge factor consists of cultivation, post harvest and cooperatives knowledge. The economics factors consist of farming income, and external incomes from the cooperatives. And then for the social factors consist of support from the bank, government, and farmers group for the farmers when they join the cooperatives. This variable then have some indicators that which are then analyzed using SEM-PLS to obtain the most influential factors.

Therefore, to further elaborate on the factors that influence farmers to join the KPTO-SJS cooperative, the identification of the factors can be seen in table 1 below. Then further analysis was carried out using SEM-PLS.

Table 1. Indicators and Latent Variables of Factors That Influence Farmers To Join Cooperatives

No.	Factors	Latent Variables	Indicator	Code
1	Characteristics (X1)	Age (X.1.1)	My age makes it easy for me to accept new knowledge	UM1
			My age makes me easy to accept new information	UM2
			My age makes me creative with new innovations	UM3
			My age makes it easy for me to accept input from other people	UM4
			My age makes me excited to join the cooperative	UM5
		Education Level (X.1.2)	My level of education makes it easy for me to accept new knowledge	TP1
			My education level makes it easy for me to accept new information	TP2
			My education level makes me creative with new innovations	TP3
			My education level makes it easy for me to accept input from others	TP4
			My education level makes me excited to join the cooperative	TP5
		Farming Experience (X1.3)	My farming experience makes me easy to accept new knowledge	PG1
			My farming experience makes me easy to accept new information	PG2

No.	Factors	Latent Variables	Indicator	Code
			My farming experience makes me less creative with new innovations	PG3
			My farming experience makes it easy for me to accept input from others	PG4
			My farming experience makes me excited to join the	PG5
			Joining a cooperative has improved my farming experience.	PG6
		Land Area (X1.4)	The area of land I own increases my desire for organic tea cultivation	LL1
			The area of land that I own is an obstacle in doing organic tea farming	LL2
			The land area that I own provides an opportunity for a wider organic tea business	LL3
			The area of land that I have made me take the initiative to join the cooperative	LL4
		Family Numbers (X1.5)	The number of dependents I have makes me do organic tea farming	TG1
			The number of dependents I have makes me do organic tea farming	TG2
			The number of dependents I have made me join the	TG3
			Joining the cooperative helps me increase the income of the	TG4
2	Knowledge (X2)	Knowledge of Organic Tea Cultivation (X2.1)	No knowledge of post-harvest processing before joining the	BTO1
			Joining a cooperative increases farmers' knowledge about the post-harvest processing of the	BTO2
			Joining a cooperative increases farmers' knowledge of prices	BTO3
			I already have knowledge about Post Harvest before joining the	PPP1

No.	Factors	Latent Variables	Indicator	Code
		Post-harvest knowledge (X2.2)	Joining a cooperative makes farmers' knowledge of Post Harvest increase	PPP2
			Joining a cooperative increases farmers' knowledge of Post-Harvest Processing	PPP3
		Cooperative Knowledge (X2.3)	I already have knowledge about cooperatives before joining the	PK1
			Joining a cooperative increases farmers' knowledge about Cooperative Organization	PK2
			Joining a cooperative increases farmers' knowledge of Cooperative Management	PK3
3	Economy (X3)	Farming Income (X3.1)	Farming income increased after planting the organic tea	PU1
			Farming income increased due to the high price of organic tea leaves	PU2
			Farming income increases due to high price of processed organic	PU3
			Income is increasing due to marketing through	PU4
			Income is increasing because the cooperative provides a high price for	PU5
			Income increased to obtain the remaining operating results of the cooperative	PU6
		Income from the cooperative (X3.2)	Apart from organic tea gardens I get high income from other farming	PDK1
			Cooperatives provide opportunities to earn additional income apart from	PDK2
			Additional income is not obtained from the cooperatives	PDK3
			Additional income is obtained outside of the tea farm	PDK4
			Additional income is obtained from outside the cooperatives	PDK5

No.	Factors	Latent Variables	Indicator	Code
			Additional income from outside the tea garden/cooperative is greater	PDK6
4	Social (X4)	Banking Support (X4.1)	Joining a cooperative allows me to get bank support	DP1
			Bank encouraged me to join the cooperative	DP2
		Government Support (X4.2)	Joining a cooperative made me get support from the government	DPP1
			I joined the cooperative because of the government's encouragement	DPP2
		Support for Farmer Groups (X4.3)	I joined the cooperative because of the encouragement of the farmer group	DKT1
			Joining a cooperative gave me the support of the farmer group	DKT2

Data is measured by calculating farmers' perceptions of indicators using a Likert scale of 1 to 5. And then analyzed using SEM-PLS data analysis with the following model hypotheses:

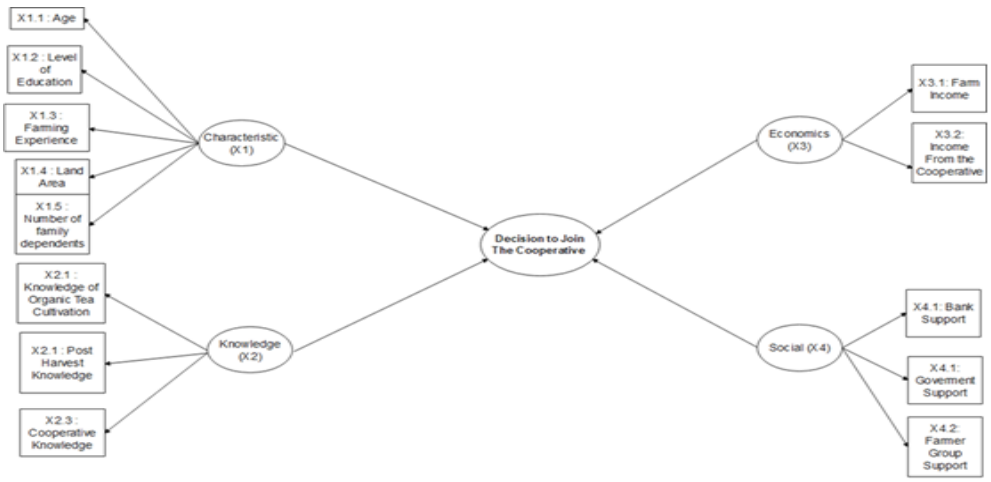

Figure 1.
The Hypothesis of Farmers' Decision Making To Join The KPTO Sebelas Jurai Saiyo Cooperative

The use of SEM-PLS is highly recommended when we have a limited number of samples while the model being built is complex (Dash & Paul,

2021). The type of analysis used in this study is confirmatory analysis. Confirmatory analysis was conducted to measure the relationship between latent variables and their indicators (Woods et al., 2014). The hypotheses in this study are:

1. H_0: the latent variable has no significant effect on the decision of farmers to join the cooperative
2. H_1: the latent variables have a significant effect on farmers' decisions to join cooperative

This hypothesis is tested by carrying out several stages of analysis as follows:

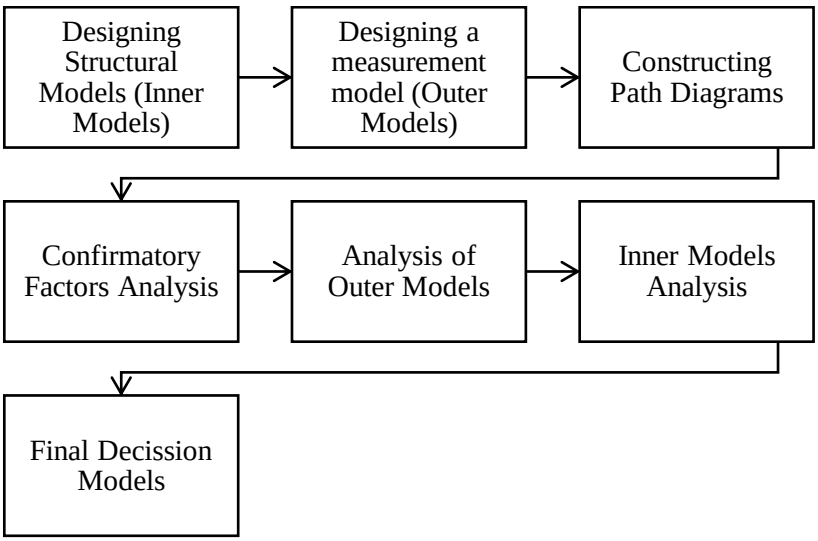

Figure 2.
The Stage of Analysis In This Study

The results of the analysis of the hypothesis are measured by looking at the probability value (sig value) > 0.05 then H_0 is accepted, and if the probability value (sig value) < 0.05, then H_0 is rejected.

RESULT AND DISCUSSION

Profile of Research Area

Solok Regency is a highland area located at 284 – 1,458 m above sea level (Badan Pusat Statistik, 2021a), this area is divided into 15 sub-districts which have 74 Nagari and 414 Jorong (Badan Pusat Statistik, 2020). Based on the geographical position, Solok Regency is bordered by Tanah Datar Regency in the North, South Solok in the South, Padang City in the West and Pesisir Selatan in the East. Based on data from the BPS 2020, the majority of the

population in Solok Regency completed high school education (Badan Pusat Statistik, 2021b).

The contribution of the agricultural, forestry and fishery sectors of Solok Regency to GDP at current prices tends to decrease every year. The contribution in 2016 reached 38.18%, in 2020 it reached 4.6 trillion or the equivalent of 34.76%. The decline occurred because of the large number of conversions of agricultural lands that were used as settlements and the needs of production inputs at the farmer level had not been met. This is different from previous years which made the agricultural sector an economic sector that contributed highly to the Regional GDP which has a large area of land and high crop production in the agricultural sector, namely Gunung Talang District with a land area of 9,436.9 ha and agricultural production as much as 61,245 tons in 2020. This figure is quite high compared to other sub-districts, namely Bukit sundi with 54,743.84 tons and Kubung District with 51,517.70 tons (Badan Pusat Statistik, 2021b).

One of the agricultural businesses that characterizes Solok Regency is tea plantations, which are spread in the Danau Kembar and Gunung Talang sub-districts. Kembar Lake District has a tea area of 81.00 Ha. The land area has not changed compared to 2019. However, on the production side, it has decreased from 134.50 tons in 2019 to 128.47 tons in 2020. Meanwhile, the tea area of Gunung Talang District decreased in 2019 by 444.00 Ha to 443.00 Ha, as well as on the production side has decreased. Meanwhile, the development of organic tea from community gardens by farmers who are members of the KPTO-SJS is in two villages, namely in Aia Batuumbuak and in Nagari Batang Barus, Gunung Talang District. This organic tea plantation business is one of the steps to increase people's income, especially tea farmers (Badan Pusat Statistik, 2021b).

Profile of Research Respondents

Respondents in this study were members of the KPTO-SJS cooperative. The number of respondents in this study were 30 people who were surveyed by snowball sampling. The profiles of respondents in this study can be seen in Table 2.

Table 2. Characteristics of Research Respondents

No.	Description	Criteria	Number (People)	Percentage (%)
1	Age	20 to 30 years	2	6.67
		31 to 40 years	2	6.67
		41 to 50 years	8	26.67
		50 years to 60	10	33.33
		60 years	8	26.67
2	Gender	Male	16	53.33
		Female	14	46.67
3	Education	Elementary	13	43.33
		Junior High School	7	23.33
		Senior High School	8	26.67
		Diploma/S1 Equivalent	2	6.67
4	Main Job	Farmers	27	90
		Others	3	10
5	Number of Family Members	0-3 People	16	53.33
		4 - 6 Persons	12	40,00
		7 - 10 Persons	2	6,67
6	Status in Family	Head of Family	18	60,00
		Family Member	12	40,00
7	Length of Business	1 s/d < 5 years	3	10
		5 s/d < 10 years	3	10
		10 to < 15 years	3	10
		15 to < 20 years	1	3.33
		20 to < 30 years	2	6.67
		30 years	18	60
8	Duration of Organic Tea Farming	1 to < 5 years	15	50
		5 to < 10 years	8	26.67
		10 to < 15 years	4	13.33
		15 to < 20 years	1	3 ,33
		20 years	2	6.67
9	Land area	< 1/2 ha	3	10
		1/2 ha to 1 ha	8	26.67

No.	Description	Criteria	Number (People)	Percentage (%)
		1 ha to 2 ha	13	43.33
		2 ha	6	20
10	Land Ownership Status	Owned	27	90
		Rent	2	6.67
		Others	1	3.33

From the table above, it can be seen that the respondent are in the age range of 40 to 60 years, have a main job as a farmer, the dominant is male, the status as the head of the family in a household with an average education level of Elementary School, with the family members is 0 to 3 people, with farming experience above 30 years. Meanwhile, the experience as an organic tea farmer is 1 to 5 years with ownership status is own land with an average area of 1 to 2 ha. These household characteristics will affect the ability of farmers to make decisions in order to survive in their farming business, this is in line with the profile of 50% of farmers in the world (Rathi, 2020). This also influences farmers' decisions to develop their farming businesses, including the decision to join the cooperatives.

Profile of KPTO Sebelas Jurai Saiyo

KPTO–SJS is a cooperative that has a legal entity Decree of the Minister of Cooperatives and Small and Medium Enterprises Number: 004461/BH/M.KUKM.2/VI/2017. KPTO-SJS consists of organic tea farmers with a business focus on producing organic tea shoots which are then processed into premium quality tea. Founded on April 20, 2017 with a total of 26 founding members. The KPTO-SJS Cooperative was formed by representatives of 4 farmer groups, namely Rawang Saiyo, Serumpun Hijau Lestari (SHL), Kabun Bau, and Lurah Ingu Sejahtera. The farmer groups are representatives of 11 tribes, so the cooperative that was formed was named Sebelas Jurai Saiyo.

KPTO-SJS manages the cultivation of tea gardens together with members covering an area of 125.26 hectares. This cooperative has also been registered as a Tea Producer Cooperative which has Fairtrade International Certification. With the concept and system of Empowerment, Administrative Management & Hybrid Sustainable Plantation, KPTO-SJS is managed by Management & Managers who are reliable, skilled & expert in their fields. Having members who are trained and built on a bottom up through education on the Economic Togetherness System and Partnership Management (SKE-MK). In addition, this cooperative also implements a Business Model based

on the Golden Triangle, namely: Cooperatives, Business Actors, and the Solok Regency Government under the name "Tungku Tigo Sajarangan" which is one of the cultural practices of Minangkabau local wisdom.

The number of members of the KPTO-SJS cooperative as of February 2018 is 99 people. Members come from four (IV) farmer groups spread over two (2) sub-districts: Gunung Talang & Danau Kembar and three (3) Nagari: Batang Barus, Aia Batuumbuak & Simpang Tanjung Nan Ampek. However, in 2020, from the time of the COVID-19 pandemic until the time this research was conducted, the number of KPTO-SJS members had resigned as many as 66 people, so that the remaining active members were 33 people.

This decline shows the decline that occurred to the cooperative. Therefore, the researcher tries to identify what are the reasons for farmers to withdraw from cooperative membership. Of the 30 sample farmer members interviewed, there were 8 members who were not active. From the answers of the 8 respondents, it can be concluded that the reasons farmers leave the cooperative are as follows:

1. The work that must be done for organic tea cultivation is heavier than conventional cultivation while the results obtained are not comparable
2. The results obtained are not able to meet the needs of the family
3. There is dissatisfaction with cooperative management
4. Termination of the cooperation contract with the organic tea management company
5. Because members are not fully involved in making important decisions in the cooperative

Factors Influencing the Decision of Members To Join The KPTO Eleven Jurai Saiyo Cooperative

To obtain the factors that influence the decision of members to join the KPTO-SJS Cooperative through the SEM-PLS model. This analysis aims to examined the relationship between variables that exist in a model. The following analysis stages are carried out:

1. Confirmatory Factor Analysis

This analysis was conducted to assess indicators that meet the criteria in the SEM-PLS analysis. Assessment is carried out between latent variables on dimensions and indicators (Schumacker & Lomax, 2004; Wood, 2008). From the results of the analysis, it is found that there are indicators that have not been able to meet the loading factor value of <0.5 in each variable, thus the indicator is removed from the model to be continued in the next confirmatory analysis. The results of the analysis can be seen in table 3 below.

Table 3. Initial Confirmatory Analysis of Latent Variables On The Dimensions and Indicators

No	Factor	Indicators Removed Because the Loading Factor Value < 0.5
1	Characteristics (X1)	TP 5 with a value of 0.478 and LL2 with a value of 0.104
2	Knowledge (X2)	PK1 with a value of 0.407, PK3 with a value of 0.478 and PPP1 with a value of 0.476
3	Economic (X3)	None
4	Social (X4)	None

Based on table below, then further confirmatory analysis (final) was carried out so that the results obtained that the *loading factor* had met the requirements with a value > 0.5. Then the analysis can be seen as in table 4 below.

Table 4. Final Confirmatory Analysis of Latent Variables On Dimensions And Indicators

No	Factor	Results of Final Confirmatory Analysis
1	Characteristics (X1)	Characteristics are proven to be formed by five dimensions, namely the dimensions of age, education level, farming experience, land area and number of dependents
2	Knowledge (X2)	Knowledge is proven to be formed by three dimensions, namely knowledge of organic tea cultivation, post-harvest knowledge and knowledge of cooperatives
3	Economics (X3)	Economic variables are proven to be formed by two dimensions, namely farm income and income from cooperatives
4	Social (X4)	Social variables are proven can be formed by three dimensions, namely banking support, government support and farmer group support

This table shows that the indicators mentioned above can be used for the analysis. These results prove that the indicators that fall into the valid category are indicators that can influence each independent variable that influences farmers' decisions in joining cooperatives. Characteristics, knowledge social and economic (Ratulangi et al., 2019; Sipayung et al., 2021) factors can underlie the behavior of farmers in acting or making decisions

including the decision to join an institution such as a cooperative. From this results then the further analysis is *outer model* SEM-PLS.

2. Analysis of the Outer Model (Measurement Model) SEM-PLS

The *outer model* was carried out to see the relationship between each indicator and its latent variables by looking at the feasibility of the data through validity and reliability before testing the hypothesis (Ingranti et al., 2012; Nawanir et al., 2020). The size is seen from three criteria, namely reliability, convergent validity and discriminant validity (Nawanir et al., 2020). The results of the validity and reliability tests are shown as follows:

a. Convergent Validity Test Convergent

Validity is indicated by the correlation between indicators and latent variables. Proof of convergent validity can be achieved in two ways, namely through the achievement of criteria and through model comparison tests (Hair et al., 2011; Nawanir et al., 2020). In this study, convergent validity was proven through the achievement of criteria. The measurement is considered to have met convergent validity if it has a loading factor indicator of at least 0.5, the results can be seen in the image below.

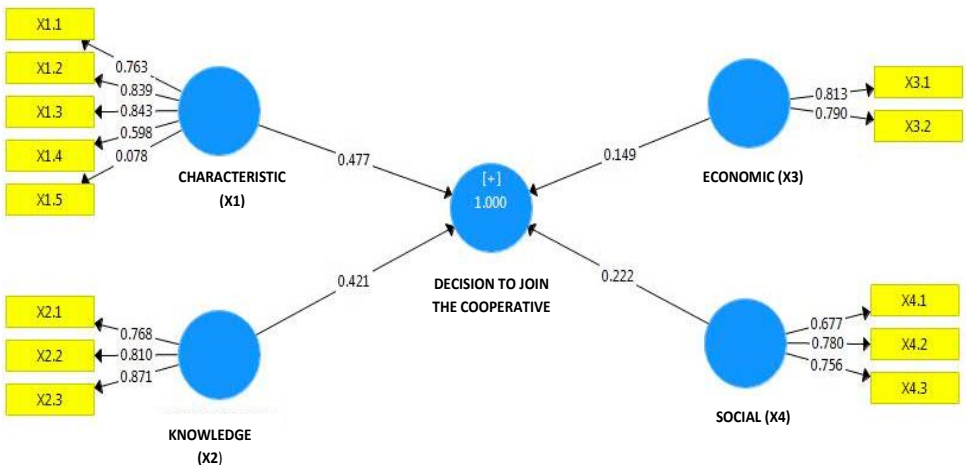

Figure 3.
Results of the Loading Factor Measurement Model (Initial)

The loading factor value obtained is in the range of values between 0.078 to 0.871. These results indicate that not all indicators have good convergent validity. Thus, the indicator cannot be said to be valid for measuring each of the latent variables. So the indicator with a small value of 0.50 is removed from

the measurement model, namely the X1.5 indicator (number of dependents). So that the outer model can be seen as shown below.

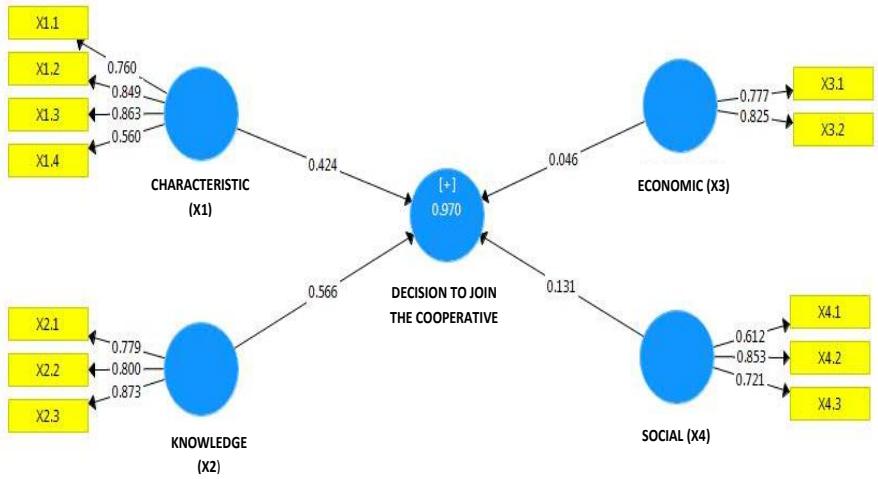

Figure 4.
The results of the Loading Factor Measurement Model (Final)

With a range of values between 0.560 to 0.873, it means that all indicators have met the requirements for further analysis because they have good convergent validity and are declared valid to measure the latent variables.

b. Discriminant Validity Test

To see the difference in the validity value of a variable when compared to other variables, a discriminant validity test was carried out (Nawanir et al., 2020). One way to measure discriminant validity is to compare the square root value of the *average variance extracted* (AVE) obtained through the correlation values between variables (Hair et al., 2011). The results of the AVE value, square root of AVE *(Fornell Larcker criterion*) and *cross loading are* presented in the table below.

Table 5. shows that the AVE value of all latent variables ranges from 0.526 to 0.670, meaning that the value the AVE of all variables is greater than 0.5. Then the value of *Fornell's larcker criterion* ranges from 0.725 to 0.818, meaning that the value of the square root of the AVE of all variables is greater than 0.7. These results indicate that all latent variables used in this study have good discriminant validity. The value of cross loading between indicators on latent variables is greater than the value of cross loading indicators on other latent variables. The value of the cross loading indicator X1.1 on the latent variable X1 is 0.760, which is greater than the value of the cross loading indicator X1.1 on the variables X2 (0.397), X3 (-0.067), X4 (0.244) and Y (0.523).

This indicates that the measurement model has met the criteria for discriminant validity.

Table 5. Value Average Variance Extracted (AVE)

No	Factor	Cronbach's Alpha	Composite Reality	AVE
1	Decision to Join a Cooperative (Y)	0.866	0.812	0.526
2	Characteristics (X1)	0.762	0.848	0.589
3	Knowledge (X2)	0.753	0.858	0.67
4	Economics (X3)	0.443	0.782	0.642
5	Social (X4)	0.583	0.776	0.541

Table 6. Fornell Larcker Criterion

No.	Factors	Economic (X3)	Characteristics (X1)	Decision to Join a Cooperative (Y)	Knowledge (X2)
1	Economic (X3)	0.801			
2	Characteristics (X1)	0.232	0.767		
3	Decision to Join Cooperative (Y)	0.429	0.858	0.725	
4	Knowledge (X2)	0.473	0.662	0.918	0.818
5	Social (X4)	0.13	0.367	0.509	0.381

Table 7. Cross loading

No	Indicator	Decision to Join Cooperative (Y)	Characteristics (X1)	Knowledge (X2)	Economic (X3)	Social (X4)
1	X1.1	0.523	0.760	0.397	-0.067	0.244
2	X1.2	0.740	0.849	0.520	0.359	0.248
3	X1.3	0.826	0.863	0.607	0.236	0.408
4	X1.4	0.455	0.560	0.499	0.081	0.186
5	X2.1	0.646	0.418	0.779	0.18	0.181
6	X2.2	0.767	0.569	0.800	0.548	0.364
7	X2.3	0.826	0.618	0.873	0.042	0.367
8	X3.1	0.325	0.123	0.377	0.777	0.261
9	X3.2	0.361	0.243	0.382	0.825	-0.037
10	X4.1	0.313	0.266	0.279	0.278	0.612
11	X4.2	0.490	0.329	0.313	0.015	0.853

c. Composite Reliability Composite

Reliability is used to describe the measurement model to be tested using the reliability coefficient (Hair et al., 2011; Nawanir et al., 2020). A group of indicators that measure a variable can be said to have good composite reliability if it has composite reliability 0.7 although not an absolute standard (Nawanir et al., 2020). The composite reliability value of all latent variables ranging from 0.776 to 0.866 (Table 5) means that all latent variables have good composite reliability. So that it can be continued in the next test.

3. Inner Model Analysis (Structural Model)

Inner model analysis was conducted to measure the causality relationship between each latent variable by evaluating the effect of constructs between latent variables and testing hypotheses (Hair et al., 2011). The analysis was carried out by calculating through R-square for the independent construct and the path coefficient value or t-value for the significance level in the hypothesis by comparing the t-count value with the t-table at a confidence interval of 90% and *two tailed* 1.645 (Hair et al., 2011; Ingranti et al., 2012; Nawanir et al., 2020; Schumacker & Lomax, 2004). Then the results of the analysis are as follows:

Table 8. Results of the Inner Model (Structural Model) Analysis

No.	Factor	R Square	Coefficient of Path	t Statistics	P Values
1	Decision to Join a Cooperative (Y)	0.956			
2	Characteristics (X1) → Y		0.412	7.017	0
3	Knowledge (X2) → Y		0.576	15.059	0
4	Economy (X3) → Y		0.047	2.186	0.04
5	Social (X4) → Y		0.099	2.667	0.022

a. Model Suitability Test (Goodness of Fit)

Test the suitability of the model based on established criteria called the *Goodness of Fit. Goodness of Fit* from *Inner Model* measured using *R-square* dependent latent variable with the same interpretation as regression. The R^2 value obtained from the calculation is 0.965 or the equivalent of 96.5%. The *R-square* is the result (in the form of a percentage) on the representation of the independent variable (X1 to X4) on the dependent variable (Decision to join a cooperative). R^{2A} value is above 0.2 (equivalent to 20%). Based on the R^2 value, it can be explained that the variable of the decision to join the cooperative can

be explained by the variables of farmer characteristics, knowledge, economics and social of 96.5%, the remaining 3.5% is explained by other variables that are not studied or included in the model. this research.

b. Path coefficient model hypothesis

This test is a causality analysis conducted to assess the relationship between exogenous and endogenous variables in the study. The effect of exogenous variables on endogenous variables is stated to be significant based on the p value (probability) (Nawanir et al., 2020). The hypotheses in this study are:

1. H_0: exogenous variables have no significant effect on endogenous variables (decision to join cooperatives)
2. H_1: exogenous variables have a significant effect on endogenous variables (decision to join a cooperative)

Decision making from the hypothesis test is if the probability value (sig value) > 0.05 then H_0 is accepted, and if the probability value (sig value) < 0.05 then H_0 is rejected . In this study, the results of the analysis are shown in Figure 4 below.

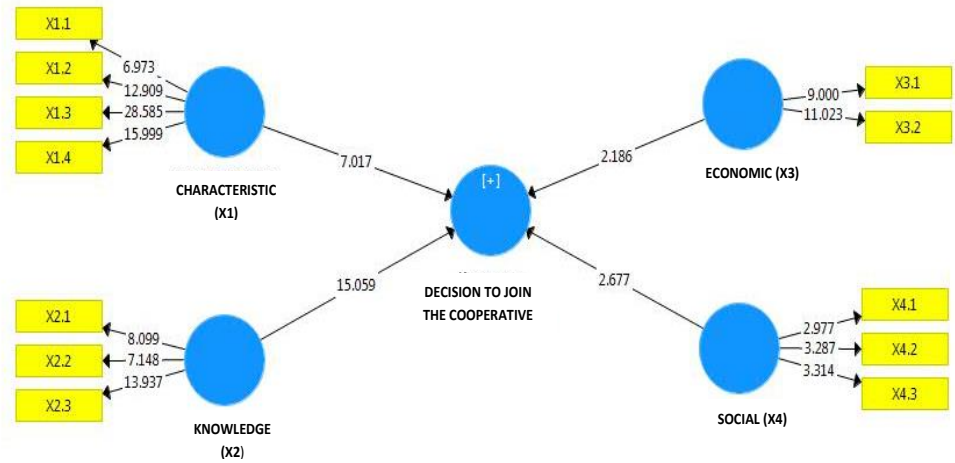

Figure 5.
Final Decision Making Model of Farmers Joining Cooperatives

Based on the results that shown in Table 8., information is obtained that for all independent variables analyzed, the path coefficient (*Path Coefficient*) is positive, the significance value is less than 0.05, and the T value is calculated larger than T table. So it can be concluded that all independent variables (characteristics, knowledge, economy, and social) have a significant influence on farmers' decisions to join cooperatives. However, the variable that most affected the farmers in joining cooperatives was knowledge with the highest

score of 0.576. Then followed by characteristics of 0.412, social of 0.099 and economic factors of 0.047.

The results of this study prove that the decision of farmers to join cooperatives comes from individual desires based on their characteristics, knowledge that they have, economic opportunities and social factors that contained in cooperatives. Because all variables have proven to have a significant effect on farmers' decisions in joining cooperatives. An increase in each of these variables will increase the decision of farmers to join the cooperative, in this case it is marked by an increasing the number of farmers who will join as members of the cooperative. This is in line with the results of research that was conducted by Giuliani et al., (2017), joining a cooperative can change the social behavior of the farmers, besides that joining a cooperative can also improve the economy of farmers through the benefits they will get from the remaining operating results (Cook & Burress, 2009; Hatta, 2018; Kahar & Susila, 2012; Yustika, 2007) which is in addition to the profits obtained directly from the farm. However, from that all variabels, knowledge and characteristics of farmers are the biggest factors that influencing their awareness to join the cooperatives. This is in accordance with Dwijatenaya & Raden (2016) that shown the quality of farmers' will affect their way of doing things related to their productivity. So increasing farmers' knowledge is a must to improve farmers' ability to make a decisions to joining the cooperatives.

CONCLUSION

The conclusions of this study are:

1. The KPTO Eleven Jurai Saiyo Cooperative was formed by representatives of 4 farmer groups, namely Rawang Saiyo, Serumpun Hijau Lestari (SHL), Kabun Bau, and Lurah Ingu Sejahtera. The farmer groups are representatives of 11 tribes, so the cooperative that was formed was named Eleven Jurai Saiyo.
2. As many as 53% of farmers stated that they joined the cooperative because the cooperative gave a high price for organic tea produced by the farmers. Another reason is the clear market guarantee offered by the cooperative and only 7% of farmers answered that production input assistance for cultivation was the reason they joined.
3. The most influential factor on the decision of farmers to join a cooperative is the knowledge factor (0.576). Then followed by characteristics (0.412), Social (0.099) and lastly economic factors (0.047**)**

ACKNOWLEDGEMENT

Thanks are conveyed to Andalas University through the Institute for Research and Community Service (LP2M) which has facilitated young lecturers to be able to carry out research in order to gain scientific experience capital that is useful for carrying out further studies or carrying out research with more funds, volume and benefits. The focus of this research is on food security in accordance with the focus areas of the National Research Priorities for 2020-2024 and the Research Master Plan of Andalas University, to re-examine theories, concepts, principles, procedures, methods, and/or models that have become the content of science, and technology. Then to the KPTO-SJS management for the cooperation that has been given during the research process and to all parties who have helped carry out this research.

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