

## ***Analysis of Influential Factors in the Agricultural Sector Cooperatives Success in Lampung Province***

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### **ABSTRACT**

*Cooperatives can potentially have a broad impact on the economic order. The success of cooperatives can benefit members, the surrounding environment, and even the broader scope. The agricultural sector is the third largest number of cooperatives in Lampung Province. This research aimed to analyze the factors that affect cooperative business volume, and net income of agricultural sector cooperatives in Lampung Province. The number of samples in this study was 33 cooperatives. The samples are cooperatives that run agricultural related businesses and cooperatives whose members are agricultural business actors in Lampung Province. The multiple linear regression was used to analyze factors that effectd the business volume and the net income. It was found the number of members and business units have a negative effect on business volume, while own capital and loan capital have a positive effect on business volume. At the same time, the managers' availability and the chairman's education level do not affect the business volume of agricultural sector cooperatives in Lampung Province. Own capital, loan capital, and the chairman's high level of education have a positive effect on net income, and the number of members and business units have a negative effect on the net income. In contrast, the manager availability and the chairman's education level at intermediate and low levels have no effect on the net income of agricultural sector cooperatives in Lampung Province.*

**Keywords:** *agricultural cooperatives, business volume, net income*

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### **INTRODUCTION**

Cooperatives are growing and are in demand by people in Lampung Province. Public interest in cooperatives that increases along with the emergence of new cooperatives is unfortunately not matched by the increase in active cooperatives. The total development of cooperatives in Lampung Province increased from 2018–2021, but the number of inactive cooperatives was greater than that of active cooperatives (Dinas Koperasi dan UMKM Provinsi Lampung, 2022). Inactive cooperatives can occur due to various factors, both internal and external factors of the cooperative. Internal problems include problems with membership, management, supervisors, managers, and employees of the cooperative, while external problems include the cooperative's relationship with banks, other businesses, and also with government agencies (Sitepu and Hasyim, 2018). Inactive cooperatives in Lampung Province experience problems including low quality institutional organizational governance, low business competitiveness, low quality Human Resources (HR) of cooperative actors, and low health and compliance of cooperatives in complying with cooperative regulations (Dinas Koperasi dan UMKM Provinsi Lampung, 2021).

Agricultural sector cooperatives rank third in the number of cooperatives in Lampung Province. This is supported by agriculture, which is the sector that has the largest contribution to gross regional domestic income and is the main employment of the largest population in Lampung Province in 2021 (Badan Pusat



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Statistik, 2022). Active cooperatives in the agricultural sector are still lower than of the 940 cooperatives that exist, only 31.8 percent are cooperatives which is classified as active (Dinas Koperasi dan UMKM Provinsi Lampung, 2022). There needs to be an effort so that active cooperatives have a larger number. Cooperatives can be used as business entities to develop the agricultural sector. There are several reasons why cooperatives are very necessary for business development in the agricultural sector (Baga, Lukman Mohammad, Rahmat Yanuar, Feryanto, 2009). First, farmers are relatively small businesses, so they have a low bargaining position. Second, the agricultural product market is generally controlled by a relatively small number of buyers. Third, the quality of production varies, making it difficult for farmers to market their products individually. Cooperatives in this sector have the potential to continue to develop, and it is important to carry out performance evaluations to improve quality so that they can make efforts to become successful cooperatives.

One of the successes of a cooperative can be seen in the volume of business and net income as well as the economic benefits obtained by members. Business volume is an important factor in the economic benefits received by cooperative members and is closely related to net income. (Azwar, 2018) stated that the economic activity of cooperatives can essentially be seen from the large volume of cooperative business, which will later effect profit generation or net income. Indra and Dewi (2021) state that net income is an economic benefit in which there is a member's share that will be received at the end of each financial year.

The aim of this research is to analyze the factors that effect business volume and the net income of agricultural sector cooperatives in Lampung Province.

## RESEARCH METHODS

The research locations were determined in Way Kanan Regency, Tanggamus Regency, Pringsewu Regency, South Lampung Regency, and Bandar Lampung City because it has the largest number of agricultural sector cooperatives. The number of cooperatives in the research sample was 33. Sampling is carried out by purposive sampling. The cooperatives used as research samples are active cooperatives, cooperatives that have been incorporated for at least two years, and cooperatives that have been incorporated for at least two years, and cooperatives that have a minimum accountability report of the management and supervisors during two years in a row. Factors that effect the business volume and net income of cooperatives are analyzed using multiple linear regression. Before testing the hypothesis, classical assumption tests were carried out, namely normality, multicollinearity, and heteroscedasticity tests. The model used are as follows (Ghozali, 2018):

$$Y_1 = a + \beta_1 NM + \beta_2 OC + \beta_3 LC + \beta_4 AS + \beta_5 NB + \delta_1 DM + \delta_2 DC1 + \delta_3 DC2 + e$$

$$Y_2 = a + \beta_1 NM + \beta_2 OC + \beta_3 LC + \beta_4 AS + \beta_5 NB + \delta_1 DM + \delta_2 DC1 + \delta_3 DC2 + e$$

Description :

$Y_1$  = Business volume (Rp)

$Y_2$  = Net income (Rp)

NM = Number of members (people)

OC = Own capital (Rp)

LC = Loan capital (Rp)

AS = Assets (Rp)

NB = Number of business units (unit)

DM = Manager availability

There is no manager : DM = 0

There is a manager : DM = 1

DC<sub>1</sub> dan DC<sub>2</sub> = Chairman's education

Low education ( ≤ junior high school) : DP<sub>1</sub> = 0, DP<sub>2</sub> = 0

Medium education (senior high school) : DP<sub>1</sub> = 1, DP<sub>2</sub> = 0

Higher education (university) : DP<sub>1</sub> = 0, DP<sub>2</sub> = 1

a = constant

β<sub>i</sub>, δ<sub>i</sub> = regression coefficient

e = error factor

F test

Hypothesis → H<sub>0</sub> : β<sub>i</sub> = δ<sub>i</sub> = 0

H<sub>1</sub> : There is a minimum of β<sub>i</sub> ≠ 0 or δ<sub>3</sub> ≠ 0

- If F count > F table or significance value < 0,10 then accept H<sub>1</sub> and reject H<sub>0</sub>. This means that the number of members, own capital, loan capital, assets, number of business units, availability of managers, and educational level of the chairman together have a significant effect on the dependent variable (business volume or net income).
- If F count > F table or significance value > 0,10 then accept H<sub>0</sub> and reject H<sub>1</sub>. This means that the number of members, own capital, loan capital, assets, number of business units, availability of managers, and educational level of the chairman together have no real effect on the dependent variable (business volume or net income).

T test

Hypothesis → H<sub>0</sub> : β<sub>i</sub> = 0, δ<sub>i</sub> = 0

H<sub>1</sub> : β<sub>i</sub> ≠ 0, δ<sub>i</sub> ≠ 0

- If t count < t table or the significance value is > 0,10 then accept H<sub>0</sub> meaning that the individual independent variables have no real effect on the dependent variable.
- If t count > t table or the significance value is > 0,10 then accept H<sub>1</sub> meaning that the individual independent variables have a real effect on the dependent variable.

## RESULTS AND DISCUSSION

**General Condition of Cooperatives.** The majority of cooperative members based on Table 1 are less than 100 people. Cooperative capital in this study consists of own capital and loan capital. The majority of the cooperative's own capital and loan capital is less than two hundred and fifty million rupiah. Based on the amount of own capital and loan capital, there are 21 cooperatives that have a larger own capital component than their loan capital. The remaining 12 cooperatives have a higher loan capital component compared to the cooperative's own capital. Cooperative assets are predominantly less than two billion five hundred million rupiah. Most cooperatives have two to three business units, while 24,24 percent of cooperatives run a single business and cooperatives that run more than three business units are only 16,16 percent. The majority of cooperatives do not have managers who help carry out cooperative activities, especially business activities. There are limited cooperatives in the absence of managers, one of which is that cooperatives do not have enough capacity to pay managers. The majority of cooperative chairman education is at the higher education level. The education of cooperative chairman is classified based on Undang-Undang Republik Indonesia Nomor 20 tahun 2003 concerning Sistem Pendidikan Nasional, which states that formal education is a structured and tiered educational pathway consisting of basic education, secondary education, and higher education.

Table 1. General condition of cooperatives

No	Item	Number of cooperatives (unit)	Proportion (%)
1	Number of members (people)		
	≤ 100	22	66,67
	101 – 500	9	27,27
	> 500	2	6,06
2	Own capital (million rupiah)		
	≤ 250	23	69,70
	251 – 1.000	6	18,18
	> 1.000	4	12,12
3	3 Loan capital (million rupiah)		
	≤ 250	22	66,67
	251 – 1.000	6	18,18
	> 1.000	5	15,15
4	Assets (rupiah)		
	≤ 2,5 billion	28	84,85
	> 2,5 billion – 100 billion	5	15,15
	> 100 billion	0	0
5	Number of business units (unit)		
	1	8	24,24
	2 – 3	19	57,58
	> 3	6	18,18
6	Manager availability		
	There is manager	8	24,24
	There is no manager	25	75,76
7	Chairman's education		
	Low education	2	6,07
	Medium education	11	33,33
	Higher education	20	60,60

Source : Processsed data, 2023

**Factors that Effect the Volume of Cooperative Business.** The volume of the cooperative business shows the value of the sale or receipt of goods and services as well as the distribution of loans and financing in a single fiscal year, which is the fiscal year 2021. The economic activity of the cooperative can be seen from the size of the cooperative business volume concerned. The larger the business volume indicates the greater the economic activity a cooperation carries out and the larger is the volume of business produced, the better. The majority of the cooperatives produced less than a hundred million rupiah. Distribution of the cooperative business volume is available in Table 2.

Table 2. Distribution of the cooperative business volume

No	Cooperative business volume (Rp)	Number of cooperatives (unit)	Proportion (%)
1	≤ 100 million	21	63,64
2	> 100 million – 1 billion	8	24,24
3	> 1 billion	4	12,12
	Total	33	100,00

Source : Processsed data, 2023

The classical assumption test that was carried out obtained results that the research data residuals were not normally distributed, so to overcome this problem a logarithmic data transformation was carried out. The multicollinearity test found multicollinearity or a linear relationship in the variables of own capital, loan capital, and assets, so the asset variable was removed to overcome the multicollinearity problem. This research model is free from heteroscedasticity. Based on the results of the classical assumption test, the best

model was obtained, namely using a data transformation model into logarithms by eliminating the asset variable. The regression equation formed based on Table 3 is as follows:

$$\text{Log}(Y_1) = 0,9228 - 0,5338 \text{Log}(\text{NM}) + 1,1121 \text{Log}(\text{OC}) + 0,1845 \text{Log}(\text{LC}) - 0,5931 \text{Log}(\text{NB}) + 0,2137 \text{DM} - 0,5575 \text{DC}_1 + 0,1063 \text{DC}_2 + e$$

The number of members and number of business units have a negative effect on the cooperative's business volume, while own capital and loan capital have a positive effect on the cooperative's business volume. The availability of managers and the educational level of the cooperative chairman have no effect on the volume of cooperative business. The results of the regression analysis of factors that effect the volume of cooperative business in the agricultural sector in Lampung Province are available in Table 3.

Table 3. Results of regression analysis of factors that effect the volume of cooperative business in the agricultural sector in Lampung Province

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0,9228	0,6749	1,3671	0,1837
Log(NM)	-0,5338***	0,1906	- 2,8002	0,0097
Log(OC)	1,1121***	0,1898	5,8591	0,0000
Log(LC)	0,1845***	0,0626	2,9465	0,0069
Log(NB)	-0,5931*	0,3290	- 1,8026	0,0835
DM	0,2137	0,4123	0,5182	0,6088
DC <sub>1</sub>	-0,5575	0,4559	- 1,2228	0,2328
DC <sub>2</sub>	0,1063	0,4619	0,2301	0,8199
R-squared	0,9048	Mean dependent var		4,3049
Adjusted R-squared	0,8781	S.D. dependent var		2,2142
S.E. of regression	0,7727	Akaike info criterion		2,5295
Sum squared resid	14,9293	Schwarz criterion		2,8923
Log likelihood	-33,7374	Hannan-Quinn criter.		2,6516
F-statistic	33,9597	Durbin-Watson stat		1,4571
Prob(F-statistic)	0,0000			

Description : \*\*\* Significant at the 99% confidence level

\* Significant at the 90% confidence level

Source : Processed data, 2023

The number of members has a significant negative effect on the business volume at a trust rate of 99 percent. In line with research conducted by (Supitriyani *et al.*, 2021), which states that the number of members negatively effects cooperative revenues in cooperatives in Pematangsiantar City, to increase the effectiveness of the relationship between the number of members and income, it is necessary to pay attention to member participation. In this case, member participation plays an important role in the volume of cooperative business. Setiawan (2004) stated that active participation from members is very necessary for the development of cooperative businesses because, without member participation, cooperatives will not be able to work efficiently and effectively. Participation can be seen as a path towards developing cooperative businesses; therefore, the success of cooperative businesses will depend on the active participation of members. There is a relationship between the number of members and the efficiency of the cooperative. Sudarmadji and Suendarti (2019) conducted research on the efficiency of savings and loan cooperatives in Jakarta with the input variables number of members, capital, and operating costs, while the output variables used were profit or net income, assets, loans, and debt repayment, which obtained efficiency results for savings and loan cooperatives is quite well. Business volume is the cooperative's income, which, if reduced by costs, will produce net income, so there is a link between cooperative efficiency and the number of

members and business volume. If the number of members as input continues to increase, it does not always increase revenue, there are certain limits to achieving efficiency.

The cooperative's own capital has a significant positive effect on business volume at a confidence level of 99 percent. For every one percent increase in own capital, the cooperative's business volume will increase by 1,1121 percent. The volume of business in cooperatives that have non-savings and loan businesses is the value of sales or receipts of goods and services. In this regard, in line with the research results of Abu and Hafid (2020), the cooperative's own capital is a very important factor in increasing sales. The greater the amount of own capital managed in the business being run, the greater the possibility of obtaining high sales. Business volume for savings and loan cooperatives or cooperatives that have savings and loan business units, namely the value of loan distribution and financing. In line with this, Sulistiowati and Kanto (2022) state that owning capital has a positive effect on loans given to cooperative members. The more capital a cooperative has, the more funds it can lend to members.

Cooperative loan capital has a significant positive effect on business volume at a confidence level of 99 percent. If the cooperative's loan capital increases by one percent, business volume will increase by 0,1845 percent. In line with Sulistiowati and Kanto (2022), who state that loan capital has a positive effect on loans given to members, loans given to members are the volume of business in the cooperative.

The number of business units has a significant negative effect on the volume of cooperative business, with a confidence level of 90 percent. In this study, 57,58 percent of cooperatives had two to three business units. As many as 24,24 percent run a single business, and 18,18 percent have more than three business units. For cooperatives that run more than one business unit, not all business units run well or are profitable. There are 16 out of 22 cooperatives that have non-savings and loan businesses as their main business, which have weaknesses in inventory turnover. Inventory turnover ratio measures the cooperative's ability to sell its products in a certain period compared to the amount of inventory it owns. This shows that the cooperative's ability to sell its products in a certain period compared to the amount of inventory it has is still low. Many business units have not yet produced maximum business volume for cooperatives. A single product strategy can be used to increase economies of scale, efficiency, and competitiveness by specializing in just one product line. This is in line with the research results of Sutanto *et al.*, (2019), who found that the scale of mono-product businesses is larger than multi-product businesses among primary tofu and tempeh cooperative craftsmen in Banyumas. Craftsmen who cultivate more soybeans which means a larger business scale tend to choose mono product businesses. A larger scale of business will result in greater sales or business volume.

Managers have no significant effect on the volume of cooperative business. Kharismawati and Fitriyati (2016) stated that the role of cooperative managers will effect cooperative acceptance and will also effect business volume. The availability of managers in a cooperative is not enough to effect the increase or decrease in the volume of cooperative business because the performance of the manager in the cooperative must be seen.

The chairman's education level does not have a significant effect on the volume of cooperative business. The value of sales or receipts of goods and services, as well as the disbursement of loans and cooperative financing, is closely related to knowledge of the business field of each cooperative. The education pursued by cooperative heads has various backgrounds. This means that the educational level of the cooperative chairman does not affect the acceptance of the cooperative because the high educational level of the chairman does not necessarily come from a cooperative educational background or from the same background as the business run by the cooperative. The ability of a cooperative to obtain business volume is not based on the education of its chairman. The policies in cooperatives are not unilateral decisions from the chairman but are produced through joint deliberation. This means that the educational background of the chairman don't play a big role in influencing the increase or decrease in the volume of cooperative business.

**Factors that Effect Net Income.** Net income shows the cooperative's net profit in one financial year, namely the 2021 financial year. Table 4 shows that cooperative net income is dominated by amounts of less than one hundred million rupiah. Even though no cooperative net income experienced a deficit or loss, the majority of cooperatives were still low in obtaining net income. Net income, after deducting reserve funds, is distributed to members in proportion to the business services performed by each member and is used for cooperative educational purposes and other cooperative needs in accordance with the decision of the member meeting. The larger the cooperative net income, the greater the services distributed to members. The greater the services that can be shared means that the greater the economic benefits obtained by members. So the greater the net income value in a cooperative, the better it is.

Table 4. Distribution of cooperatives net income

No	Net income (Rp)	Number of cooperatives (unit)	Proportion (%)
1	≤ 100 million	29	87,88
2	> 100 million – 1 billion	2	0,06
3	> 1 billion	2	0,06
Total		33	100,00

Source : Processed data, 2023

The classical assumption test that was carried out obtained results that the research data residuals were not normally distributed, so to overcome this problem a logarithmic data transformation was carried out. The multicollinearity test found multicollinearity in the variables of own capital, loan capital, and assets, so the asset variable was removed to overcome the multicollinearity problem. Based on the heteroscedasticity test, the results showed that there was heteroscedasticity in the model, so to overcome this problem, we used an improved white model. The best model in this research is the white model with logarithmic data transformation without asset variables. The results of the regression analysis of factors that influencing the net income of agricultural sector cooperatives in Lampung Province are available in Table 5.

Table 5. Results of regression analysis of factors that effect the agricultural sector cooperative net income in Lampung Province

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0,3072	0,7727	0,3975	0,6943
Log(NM)	-0,4909**	0,2287	-2,1468	0,0417
Log(OC)	0,7553***	0,2574	2,9346	0,0071
Log(LC)	0,2124***	0,0684	3,1043	0,0047
Log(NB)	-0,9471**	0,4538	-2,0870	0,0472
DM	0,3809	0,6684	0,5699	0,5738
DC <sub>1</sub>	0,3803	0,5445	0,6984	0,4913
DC <sub>2</sub>	1,1550**	0,5372	2,1500	0,0414
R-squared	0,8082	Mean dependent var		2,9080
Adjusted R-squared	0,7545	S.D. dependent var		1,9158
S.E. of regression	0,9490	Akaike info criterion		2,9405
Sum squared resid	22,5176	Schwarz criterion		3,3033
Log likelihood	-40,5185	Hannan-Quinn criter.		3,0625
F-statistic	15,0569	Durbin-Watson stat		1,8173
Prob(F-statistic)	0,0000	Wald F-statistic		16,5168
Prob(Wald F-statistic)	0,0000			

Description : \*\*\* Significant at the 99% confidence level

\*\* Significant at the 95% confidence level

Source : Processed data, 2023

The number of members and number of business units have a negative effect on the net income, while own capital, loan capital, and the high level of education of the chairman have a positive effect on the cooperative's net income. The availability of managers and the basic and secondary education level of the chairman have no effect on net income. Based on Table 5, the regression equation formed is as follows:

$$\text{Log}(Y_2) = 0,3072 - 0,4909 \text{ Log}(\text{NM}) + 0,7553 \text{ Log}(\text{OC}) + 0,2124 \text{ Log}(\text{LC}) - 0,9471 \text{ Log}(\text{NB}) + 0,3809 \text{ DM} + 0,3803 \text{ DC}_1 + 1,1550 \text{ DC}_2 + e$$

The number of members has a significant negative effect on the cooperative's net income at a confidence level of 95 percent. If the number of members increases by one percent, the net income will decrease by 0,4909 percent. The results of this research are in line with the research results of Supitriyani et al., (2021), which stated that the number of members has a negative and significant effect on the net income of cooperatives in Pematangsiantar City. The results of this research state that in order to increase the effectiveness of the relationship between the number of members and the net income, it is necessary to pay attention to member participation. Member participation plays an important role in obtaining cooperative net income. The results of this research are not in line with the research results of Indarwati and Cipta (2021) that there is a significant positive effect between the number of members and net income in savings and loans cooperatives in Buleleng District in 2017–2019 and are different from the results of Yuliasuti and Susandya (2018) that the number of members has no effect on the net income of the cooperative. Cooperative members are the backbone of the cooperative business, but not always a large number of cooperative members can increase the net income obtained by the cooperative. This can happen if the cooperative members are passive and do not participate in developing the cooperative business. Mustikaningrum (2010) stated that members' active participation will determine the success of the cooperative. Meanwhile, achieving good-quality participation or the effectiveness of member participation will depend on the suitability of members as beneficiaries, cooperative programs, and cooperative management (Ropke, 2003). This suitability means that the output of the cooperative program must be in accordance with the needs of the members and must be adjusted to the cooperative's management capabilities. If the suitability of the program, cooperative management, and members' needs do not work well, effective member participation will be difficult to achieve. Management for cooperatives that have a large number of members tends to be more difficult when compared to cooperatives that have fewer members. If the number of members of a cooperative increases if it is not balanced with the cooperative management's ability to provide services to members, it will result in the effectiveness of member participation not being achieved. Cooperatives have the aim of improving the welfare of their members, one of which is through indirect economic benefits, namely net income. Cooperatives as business entities certainly want maximum profits with minimal inputs or better known as efficiency. There is a relationship between cooperative efficiency between members and cooperative profits because one of the cooperative inputs is the number of members and one of the outputs is profit (Sudarmadji and suendarti, 2019). If the number of members as a cooperative input continues to increase, it will not always increase net income as the expected output of the cooperative. However, there is a certain limit on the number of members to achieve cooperative efficiency.

The cooperative's own capital has a significant positive effect on net income at a confidence level of 99 percent. Every time there is an increase in the cooperative's own capital by one percent, its net income will increase by 0,7553 percent. The results of this research are in line with the results of research conducted by Winarko (2014), which states that increasing the amount of a cooperative's own capital will result in an increase in the remaining amount of business results. Own capital is the main capital that comes from the cooperative members themselves. The greater the cooperative's own capital, the greater its ability to meet the



financial needs of its members. Increasing funds and managing them optimally will make it easier for cooperatives to develop their businesses so that they can increase net income.

Cooperative loan capital has a significant positive effect on net income at a confidence level of 99 percent. If the cooperative's loan capital increases by one percent, the cooperative's net income will increase by 0,2124 percent. The results of this research are in line with the research results of Dewik and Jember (2016) that loan capital has a positive and significant effect on net income in savings and loans Cooperatives in North Kuta District, Badung Regency. The more funds that are borrowed to be used as capital, the more funds that can be used to expand the business, such as the distribution of loans to members, thereby increasing the interest earned by the cooperative.

The number of business units has a significant negative effect on cooperative net income at a confidence level of 95 percent. If the cooperative business unit increases by one percent, the cooperative's net income will decrease by 0,9471 percent. Cooperatives with one business unit will focus more on developing their businesses, and businesses that grow large will have the possibility of making large profits. Mustikaningrum (2010) states that a cooperative economy will be easier to build when it focuses on implementing homogeneous service goals for members with a single business compared to multiple businesses. Through a single business, efficiency, for example, through economies of scale, can be calculated more accurately by cooperatives. For example, Cooperatives in the real sector, economies of scale are the profits that cooperatives can obtain when an increase in production is not followed by an increase in costs per unit. This aims to be a form of efficiency, so that production costs remain constant and production results are greater. Due to the fact that the more business units run by cooperatives, the more difficult it will be to manage, efficiencies such as economies of scale tend not to be easy for cooperatives to calculate.

Manager availability has no significant effect on cooperative net income. Kharismawati and Fitriyati (2016) stated that the role of managers in cooperatives needs to be reviewed. The number of managers does not affect net income, but the manager's performance affects the acquisition of net income. A cooperative manager is someone who is appointed and dismissed by the management to develop the cooperative efficiently and professionally. Certain cooperatives that have adequate human resources (HR) capabilities to develop cooperative businesses professionally do not need to recruit managers. So the availability of managers does not affect the cooperative's net income.

Cooperatives with a high level of leadership education has a significant positive effect on net income at a confidence level of 95 percent. This means that the net income of a cooperative whose chairman has a high level of education is not the same as that of a cooperative with a basic chairman's educational level. Meanwhile, the net income of a cooperative with an intermediate chairman's education level is the same as that of a cooperative with a basic chairman's educational level, which has no significant effect on the net income. The results of research conducted by Prastisi et al. (2023) stated that the level of formal education received by farmers in the Sinar Kencana II farmer group in Central Lampung Regency will support changes in mindset and behavior towards transplanter innovation. This shows that formal education is one of the factors that can determine an individual's way of thinking and making decisions. The factor of quality human resources cannot be separated from the formal education factor that has been taken into account. Through education, a person's quality can be improved in various aspects. (Indriyani, 2017) states that the education level of management effect cooperative performance; there is a positive correlation between a high level of formal education and a person's ability to adapt to various dynamics and changes in the micro and macro environment, including utilizing information technology and business collaboration networks. Chairs with a high level of education can participate in efforts for the cooperative to minimize expenses so that the revenue obtained will produce a larger net income.

## CONCLUSION

Own capital and loan capital has a positive effect, while the number of members and number of business units have a negative effect on the cooperative's business volume. The availability of managers and the education level of the chairman have no effect on the volume of cooperative business in the agricultural sector in Lampung Province. Own capital, loan capital, and the high level of education of the chairman have a positive effect, while the number of members and number of business units have a negative effect on the cooperative's net income. The availability of managers and the basic and secondary education level of the chairman have no effect on the net income of agricultural sector cooperatives in Lampung Province.

In order to increase business volume and net income, cooperatives should consider the efficiency of the number of members and the number of business units. Another thing that cooperatives should do is increase their own capital and loan capital, as well as consider a high level of education when selecting the chairman of the cooperative.

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