COMPARATIVE ANALYSIS OF PROFITABILITY OF PARTNERSHIP PATTERN OF PEOPLE'S SUGARCANE CREDIT (TRK) WITH INDEPENDENT PEOPLE'S SUGARCANE (TRM) (CASE STUDY AT PT. PG RAJAWALI II SINDANGLAUT UNIT)

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Abstract

This study aims to compare the profitability of the partnership pattern of People's Sugarcane Credit (TRK) and Independent People's Sugarcane (TRM) in PT. PG Rajawali II Sindanglaut Unit. This research method uses descriptive quantitative with profitability analysis, differential test, and multiple linear regression. The sample of this study is 90 farmers, including 30 TRK and 60 TRM. The result of this study is that there are differences in working capital financing mechanisms between TRK and TRM. The profitability analysis showed a significant difference with the profitability of TRM of (15.84%) higher than the TRK of (12.15%). Multiple linear regression analysis states that the production variable and the KUR loan variable have a significant effect on profitability, with the production variable being the most significant factor on profitability.

Keywords: Profitability, Partnership Pattern, Production, KUR Loan

INTRODUCTION

Indonesia is an agrarian country, where the majority of the population works as farmers. The agricultural sector plays an important role in meeting the needs of the population, increasing farmers' profitability, providing industrial raw materials, creating jobs, and supporting national food security (Rahma et al., 2018; Wahyuni & Nursiam, 2025). Although the contribution of the agricultural sector to Indonesia's Gross Domestic Product (GDP) has decreased, it still absorbs more than 30% of the national workforce, according to (Badan Pusat Statistik, 2023)

The plantation sub-sector, especially sugarcane, has a strategic role in the food industry and economy. In 2023, the plantation sub-sector contributed around 3.88% to national GDP, the highest among other agricultural sectors (Badan Pusat Statistik, 2023). Sugarcane (Saccharum officinarum) is one of the 15 leading plantation commodities in Indonesia that contribute greatly to the welfare of the community (Suwarto dalam Fauzi et al., 2024). Indonesia is also listed as one of the largest sugar producers in Southeast Asia.

However, national sugarcane production still faces challenges. Based on Laporan Kinerja Direktorat Tanaman Semusim Dan Tahunan Tahun 2023, national sugarcane production decreased by 14.78% compared to the previous year, with a total production of 31,045,342 tons from a potential planting area of 504,776 ha. Productivity and land use are not optimal, so efforts to increase domestic sugar production are urgently needed.

Sugarcane farmers often face capital and knowledge constraints. To overcome this, the partnership pattern between farmers and sugar mills is an effective solution. The two main patterns that are widely applied People's Sugarcane Credit (TRK) and Independent People's Sugarcane (TRM), each of which offers different mechanisms in financing, provision of production facilities, technical assistance, and profit-sharing systems (Rahma et al., 2018); (Hidayatullah, 2023); (Masyhuri et al., 2016). Research in Situbondo Regency shows that the partnership of TRK and TRM has a significant effect on increasing the quantity and quality of sugarcane production as well as the profitability of farmers (Rahma et al., 2018).

Other studies also affirm the importance of good partnerships to maximize sugarcane farmers' yields and profits (Budi et al., 2024). However, the implementation of the two partnership patterns still faces structural and technical obstacles in the field. In the Cirebon area, PT. PG Rajawali II Sindanglaut Unit establishes partnerships with sugarcane farmers through the TRK and TRM patterns, each of which offers different support according to the needs of farmers.

This study aims to compare the partnership pattern and profitability between TRK and TRM in PT. PG Rajawali II Sindanglaut Unit. In this study, it was also carried out to analyze the factors that affect profitability, so that it can provide an overview of the most optimal partnership model for the welfare of sugarcane farmers and the sustainability of the sugar industry (Fauzi et al., 2024); (Warsim et al., 2021).

REVIEW OF LITERATURE

Partnership Pattern Theory

Partnership is a business strategy between two parties over a certain period of time to achieve mutual benefits Kundang, (2017) in Trieanto et al., (2022) In the sugarcane

agriculture sector, partnerships emerged as a solution to farmers' limitations in capital and technical knowledge (Khasanah, 2019).

People's Sugarcane Credit (TRK)

The company as the core provides capital credit, production facilities, and technical guidance (Budi et al., 2024).

Independent People's Sugarcane (TRM)

Independent farmers in financing with limited technical support, research by Rahma et al., (2018) in Situbondo proves that partnerships increase sugarcane production by 18-25% and farmers' profits by 30%. Meanwhile Budi, et al. (2024) emphasized that plasma core patterns (such as TRK/TRM) improve operational efficiency.

Profitability Theory

Profitability is the ability of a business to generate profits, measured through the ratio of profit to cost (Walyupin et al., 2018). The determining factors include:

Labor: Availability and skills that affect operational efficiency (Soekartawi, 2003 in Suaibatul, 2023)

Production: an output to determine revenue (Fahmi in Dede, 2022)

Yield: an accurate measurement system and is needed to determine the contribution and distribution of results (Cahyani, et al. 2017).

KUR Loans: Access to capital expands business scale. Access to working capital for individuals/individuals, business entities/productive business groups (Minister of Economy number 11 of 2017 in (Hafsah, 2019).

Research Hypothesis

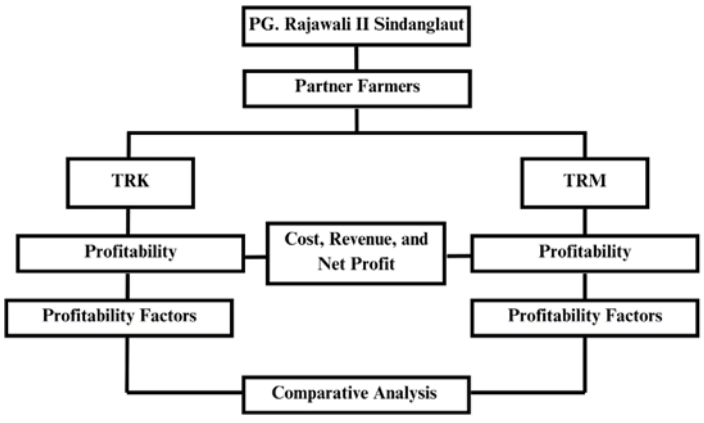
H1: There is a difference in the partnership pattern between TRK and TRM at PT. PG Rajawali II Sindanglaut Unit.

H2: There is a significant difference in the level of profitability of sugarcane farm enterprise between the partnership pattern of TRK and TRM at PT. PG Rajawali II Sindanglaut Unit.

H3: There is a significant influence of labor, production, income, and KUR loans partial and simultaneous on profitability.

Contextual Framework

Figure 1.
Contextual Framework



This research originated from observations at PT. PG Rajawali II Sindanglaut Unit. The main focus is to analyze farm enterprise in partnership with sugar mills, both through the pattern of People's Sugarcane Credit (TRK) with Independent People's Sugarcane (TRM). The profitability analysis is carried out taking into total costs, revenue, and net profit. Each partnership pattern has a different profitability factor. Then, the results were comparative analysis.

RESEARCH METHOD

The research was conducted on farmers who partnered with PT. PG Rajawali II Sindanglaut Unit. The design of this study uses a descriptive quantitative approach with a survey method. Quantitative analysis was used to analyze the profitability of sugarcane farm enterprise, while descriptive analysis was used to determine the differences in partnership patterns in PT. PG Rajawali II Sindanglaut Unit.

The research population is all partner sugarcane farmers of PT. PG Rajawali II Sindanglaut Unit has 405 farmers, including 100 TRK and 305 TRM. The sampling technique used purposive sampling, with a sample of 90 respondents, consisting of 30 TRK and 60 TRM. The data collection technique uses primary data and secondary data.

Descriptive Analysis

Descriptive analysis is used to describe research data through minimum, maximum, and average sizes. The data are presented in a histogram, then discussed descriptively to explain the phenomenon related to the research variables.

Quantitative Analysis

Profitability Analysis

The profitability analysis is carried out by calculating:

Total Production Cost

$TC = TFC + TVC$

Information:

TC: Total Cost
TFC : Total Fixed Cost
TVC : Total Variable Cost

Revenue

$TR = P \times Q$

Information:

TR : Total Revenue
P : Price
Q : Quantity of Sugarcane Production

Net Profit

$\pi = TR - TC$

Information:

π : Net Profit
TR : Total Revenue
TC : Total Cost

Profitability

Profitability = (Net Profit)/(Total Cost) × 100%

Information:
Net profit : Total receipts deducted total cost
Total cost : Total cost incurred by farmers

Differential Test Analysis (T-test)

The Independent T-test is used to determine the difference in profitability between TRK and TRM farmers.

Multiple Linear Regression Analysis

It was used to test the relationship between profitability (Y) and labor (X1), production (X2), yield (X3), and KUR loans (X4). Regression equation model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Information:
Y : Profitability or Dependent Variables
α : Constant
$\beta_1 X_1$: Labor Regression Coefficient
$\beta_2 X_2$: Production Regression Coefficient
$\beta_3 X_3$: Yield Regression Coefficient
$\beta_4 X_4$: KUR Loan Regression Coefficient
e : Coefficient Error

Model Significance Test

T-test (Partial): Assesses the influence of each independent variable on profitability.
F-Test (Simultaneous): Assesses the co-influence of independent variables on profitability.
Coefficient of Determination (R^2): Assesses the contribution of independent variables to profitability.

RESULTS AND DISCUSSION

The Partnership Pattern of People's Sugarcane Credit and Independent People's Sugarcane with PT. PG Rajawali II Sindanglaut Unit

The partnership pattern of Sugarcane People's Credit (TRK) and Independent Sugarcane People's (TRM) has a fundamental difference which lies in the way of disbursing loans and financial management by farmers. In the TRK pattern, credit funds are first disbursed through sugar mills, which then distribute the funds gradually to farmers according to the stages of sugarcane cultivation. This approach aims to ensure funds are used appropriately at each phase of plant growth.

In contrast, the TRM pattern gives farmers direct access to obtain credit from banks, so they have complete control over managing their finances. With this freedom, farmers can manage the allocation of funds based on their own priorities and strategies. According to (Puspita & Ingesti, 2024) TRM gives farmers greater freedom in managing their farm enterprise. This system allows farmers to make decisions independently, in contrast to TRKs which tend to be tied to loan terms and financial obligations to sugar mills. Based on the results of the study, farmers who follow the TRM pattern have the potential to earn higher income in the long term. This is because they have the flexibility to determine selling prices more effectively according to market conditions. On the other hand, in the TRK pattern, the

selling price is often already regulated and bound by agreements with sugar mills, thus limiting farmers' opportunities to adjust prices (Masyhuri, et al. 2020); (Setiawan & Hendrarini, 2024). The impact of these fundamental differences can be clearly seen in the data table of the area of cultivated land and the number of farmers who are partners with PT. PG Rajawali II Sindanglaut Unit.

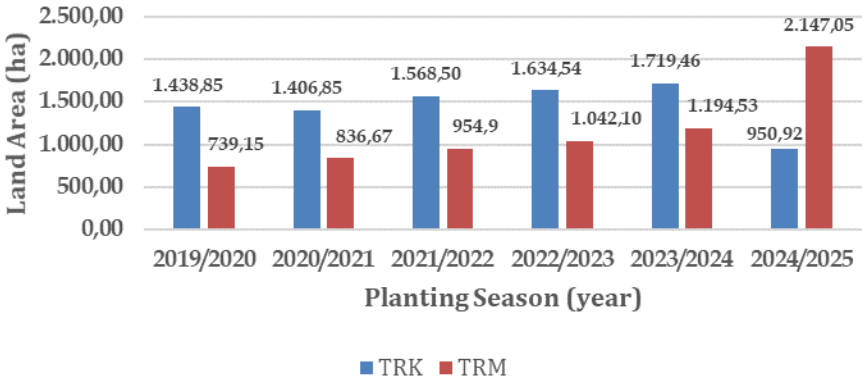


Figure 1.
PG Partnership Farmers' Land Area Data. Sindanglaut
Source: Data PG. Sindanglaut

The area of land managed by mill partner farmers shows an increasing trend from the 2023/2024 to 2024/2025 planting season, with a total of 3,097.97 hectares in the last season. However, in detail, the land area of TRK farmers has actually decreased quite significantly, from 1,719.46 hectares to 950.92 hectares. On the other hand, TRM farmers recorded a considerable increase in land area, from 1,194.53 hectares to 2,147.05 hectares. This change signals a shift in land management that is more inclined towards the TRM partnership pattern in that period.

Figure 2.
Data on the Number of PG Partnership Farmers. Sindanglaut
Source : Data PG. Sindanglaut, 2025.

Based on figure 3, there are changes that indicate a shift in farmers' interest from TRK to TRM, as well as a decrease in the number of partner farmers as a whole. The decline in partnership patterns may indicate a challenge in maintaining this pattern, while independent patterns are increasingly in demand even though the number has also fluctuated. Data shows that efficiency and income potential are the main factors in changing farming patterns.

Research conducted by Astuti, et al. (2021) revealed that farmers' education levels have an effect on extension participation, which increases the technical efficiency of sugarcane farming and encourages interest in switching to the TRM system. This system, according to Kumalasari, et al. (2019) generally provides higher income compared to the TRK system. The results of the study also confirmed that the average income of farmers who applied the TRM pattern was higher than those who used the TRK pattern.

Characteristics of Farmers

Table 1.
Respondent Characteristics

No.	Respondent Characteristics	Total	
		People	Presentase %
1.	**Age (years)**		
	36-39	4	4,44%
	40-44	15	16,67%
	45-49	27	30,00%
	50-54	24	26,67%
	55-59	8	8,89%
	60-64	11	12,22%
	65-69	1	1,11%
2.	**Education**		
	SD/Sederajat	32	35,6%
	SMP/SLTP/Sederajat	31	34.4%
	SMA/SLTA/Sederajat	23	25,6%
	D4/S1	4	4,4%
3.	**Land Area (ha)**		
	2-3,4	28	31,11%
	3,5-4,9	34	37,78%
	5,0-6,4	14	15,56%
	6,5-7,9	6	6,67%
	8,0-9,4	1	1,11%
	9,5-10,9	4	4,44%
	11,0-12,0	3	3,33%
4.	**Farming Experience**		
	2-5,3	28	31,11%
	5,4-8,7	34	37,78%
	8,8-12,1	14	15,56%
	12,2-15,5	6	6,67%
	15,6-18,9	1	1,11%
	19,0-22,3	4	4,44%
	22,4-25,0	3	3,33%
5.	**Gender**		
	Man	84	93,3%
	Woman	6	6,7%

6.	**Partnership Pattern**		
	TRK	30	33,3%
	TRM	60	66,6%

Source: Primary data, 2025 (data processed)

This data explains that the characteristics of sugarcane farmers at the study site are generally 45-49 years old, have a background in SD, have land area 3,5–4,9 ha, have less than 10 years of farming experience, are dominated by men, and prefer the TRM partnership pattern. The characteristics of this study, in line with previous findings conducted by Khowarizi, et al. (2023) show that the majority of sugarcane farmers are in the age range of 46-60 years, which is as much as 50%. In addition, most farmers have the last education at the SD, which is 46%, and farming experience of less than 10 years reaches 23%. The following is a comparison table of respondent characteristics based on the TRK and TRM partnership patterns.

Table 2.
Comparison of Respondent Characteristics

No.	Respondent Characteristics	Partnership Pattern	Minimal	Maximum	Average
1.	Age (years)	TRK	37	62	48.60
		TRM	36	65	49.82
2.	Land Area (ha)	TRK	2	11	5.08
		TRM	2	12	6.03
3.	Farming Experience (years)	TRK	2	25	7.50
		TRM	2	25	8.58

Source: Primary Data, 2025 (data processed)

This data compares the characteristics of the TRK and TRM group respondents. The average age of TRK farmers is 48.60 years, while TRM is slightly older, at 49.82 years, with a similar age range between 36–65 years. The average land area of TRK farmers is 5.08 hectares, slightly smaller than TRM which reaches 6.03 hectares, with land variations ranging from 2 to 12 hectares. In terms of farming experience, TRM has an average of 8.58 years, higher than TRK which is 7.50 years, with a range of 2–25 years of farming experience in both groups. Overall, although there are differences in age, land area, and farming experience, these two groups are relatively similar.

Profitability of Partnership Patterns

Table 3.
Results of TRK and TRM Profitability Analysis

No.	Description	Partnership Pattern	
		TRK	**TRM**
1.	a. Fixed Cost (FC)		
	1) Land Rental (Rp/ha)	8.119.725	8.870.509
	2) Bank Interest (Rp/ha)	1.200.787	1.033.997
2.	Total Fixed Cost (Rp/ha)	9.320.512	9.904.506

3.	b. Variable Cost (Labor)		
	1) Seedling Preparation (Rp/ha)	12.290.682	10.624.655
	2) Land Cultivation (Rp/ha)	2.443.077	2.264.787
	3) Gutter Manufacturing (Rp/ha)	973.917	900.677
	4) Gutter Cleaning (Rp/ha)	1.083.990	959.031
	5) Weeding (Rp/ha)	1.027.083	725.456
	6) Planting (Rp/ha)	4.007.564	4.022.830
	7) Fertilizing (Rp/ha)	440.310	515.520
	8) Soil Tilling (Rp/ha)	1.336.614	1.194.693
	9) Irrigation (Rp/ha)	894.685	862.244
	10) Pruning (Rp/ha)	1.876.969	1.807.701
	11) ZA Fertilizer (Rp/ha)	2.412.861	2.447.125
	12) Phonska Fertilizer (Rp/ha)	1.176.181	1.079.837
	13) Pesticide (Rp/ha)	1.207.415	1.173.805
	14) Felling and Hauling (Rp/ha)	15.457.605	15.670.605
4.	Total Variable Cost (Rp/ha)	46.628.953	44.213.010
5.	Total Cost (Rp/ha)	55.949.465	54.117.516
6.	c. Selling Price		
	1) Sugar Price (Rp/Kg)	14.755	14.865
	2) Price of molasses (Rp/Kg)	2.550	2.643
	d. Production		
	1) Land Area (ha)	5,08	6,03
	2) Sugarcane Production/ha (Kg)	88.450	91.758
	e. Yield (%)	7,13%	6,83%
	f. Hablur (Kg) $^{(d1*d2*e)}$	32.037	37.790
	g. Farmers Share		
	1) Sugar (66% Blur) $^{(66\%*f)}$	21.144	24.941
	2) Molasses (3% Sugarcane Production) $^{(3\%*d2)}$	2.654	2.753
7.	h. Revenue		
	1) Sugar Receipts (Rp) $^{((c1*g1)/d1)}$	61.413.331	61.483.908
	2) Molasses Reception (Rp) $^{((c2*g2)/d1)}$	1.332.224	1.206.663
8.	Total Revenue (Rp)	62.745.555	62.690.571
9.	Net Profit (Rp)	6.796.090	8.573.055
10.	Profitability (%)	12,15%	15,84%

Source: Primary Data, 2025 (data processed)

The results of the study show that there is a clear difference between TRK and TRM in terms of cost, revenue, and profitability. In general, the fixed costs and variable costs incurred by the two groups of farmers are relatively the same, but the total production costs of TRM farmers are slightly lower than those of TRK. In terms of revenue, hablur are crystalline sugars from extraction, refining, and crystallizing sugarcane juice. According to Peraturan Gubernur Jawa Barat 2016 Pasal 31 Ayat 1, the number of hablur that farmers are entitled to is calculated by multiplying the sugarcane yield achieved by the total weight of sugarcane in quintals. The distribution of sugarcane production results is carried out with a proportion of

66% for farmers and 34% for PT. PG Rajawali II Sindanglaut. Meanwhile, the molasses yield is divided based on the percentage of production, where farmers get 3% and PT. PG Rajawali II Sindanglaut got 2%. The income of TRM farmers obtained a higher average income, both from the sales of sugar and molasses. This is supported by the prevailing yield distribution system, where the proportion of yields received by TRM farmers is larger. As a result, the net profit and profitability level of TRM farmers were also recorded higher than those of TRK farmers. This finding is in line with the results of previous research by Masyhuri, et al. (2016) which stated that the TRM partnership pattern is more profitable in terms of cost efficiency and profitability of the sugarcane business than the TRK pattern.

Independent Sample T-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Profitability	Equal variances assumed	.007	.932	-4.554	88	.000	-3.01667	.66249	-4.33322	-1.70011
	Equal variances not assumed			-4.495	56.151	.000	-3.01667	.67114	-4.36104	-1.67229

Figure 3.
Results of the Profitability Difference Test between the TRK and TRM
Source: Primary Data, 2025 (data processed)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Revenue	Equal variances assumed	10.248	.002	-1.992	88	.049	-442298074.7	222032828.7	-883541664.9	-1054484.4
	Equal variances not assumed			-2.782	63.844	.007	-442298074.7	158998680.4	-759949432.1	-124646717.2

Figure 4.
Results of the Revenue Differential Test between the TRK and TRM
Source: Primary Data, 2025 (data processed)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Total Cost	Equal variances assumed	.578	.449	-1.209	88	.230	-42078541.7	34809303.2	-111254717.1	27097633.7
	Equal variances not assumed			-1.244	62.811	.218	-42078541.7	33812102.6	-109650616.3	25493533.0

Figure 5.
Results of the Total Production Cost Difference Test between the TRK and TRM
Source: Primary Data, 2025 (data processed)

The results of the analysis showed that there was a clear and significant difference between the profitability of TRK and TRM, with a significance value of 0.000 < 0.05. It was proven by examining the significant difference in TRK and TRM farmers' income, with a significance value of 0.007 < 0.05. Thus, there is a significant difference in profitability and revenue between the TRK and TRM partnership patterns. On the other hand, the production cost between TRK and TRM is insignificant, since the significance value is 0.230 > 0.05.

Research on the profitability of sugarcane farm enterprise shows that the TRM partnership pattern provides greater benefits compared to the TRK partnership pattern. The higher profitability on the TRM pattern is due to better production rates. This is related to the experience of farmers and the application of cultivation techniques that are more effective in the TRM partnership pattern compared to TRK.

Several other studies also corroborate the finding that the TRM partnership pattern has a higher profitability compared to the TRK partnership pattern. Research by Masyhuri, et al. (2016) shows that farmers who apply the TRM pattern get greater profits than farmers with the TRK pattern. Based on the results of the analysis, it is suggested that policies be directed to expand the application of the TRM pattern. In addition, the research of Puspita & Ingesti (2024) supports these findings by noting that the partnership between TRM farmers and sugar mills provides decent results and shows good potential in the future. In particular, this partnership is considered to be able to increase the effectiveness of the relationship between farmers and sugar mills.

Research by Yusvianto & Kuntadi (2022) shows that the implementation of the new sugarcane purchase system is able to increase effectiveness for farmers who are members of the TRM partnership pattern. This system plays an important role in strengthening farmers' bargaining positions in partnerships with sugar mills. The strengthening of the bargaining position, if supported by assistance from the government and the private sector, has the potential to significantly increase the profitability of sugarcane farm enterprise that use the TRM pattern.

Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-40.456	12.906		-3.135	.002
	Workforce	3.402	.000	.121	1.122	.265
	Production	5.123	.000	.829	7.686	.000
	Yield	1.718	1.506	.095	1.141	.257
	KUR Loan	-2.695	.000	-.468	-3.843	.000

Figure 6.
Multiple Linear Regression and Partial Test (t-test)
Source: Primary Data, 2025 (data processed)

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$
$$Y = -40.456 + 3.402X_1 + 5.123X_2 + 1.718X_3 - 2.695X_4$$

The labor variable has a significance value of 0.265>0.05 so it does not have a significant effect on profitability. Adding labor without land addition can lead to overlabor and increased costs, so the effect depends on farmer management. This is in accordance with Yanutya (2013) research which states that the effectiveness of labor is greatly influenced by land management and conditions. The production variable showed a significant influence with a significance value of 0.000 < 0.05 and a positive regression coefficient of 5.123 which means that every 1% increase in production will increase profitability by 5.123%. This result is in line with the research of Melati, et al. (2024) which states that production has a significant effect on income. The yield variable has a significance value of 0.257 > 0.05, so it does not have a significant effect on profitability even though the coefficient is positive of 1.718, this is different from the research of Melati, et al. (2024) that yield has a significant effect. The KUR loan variable had a significant negative influence with a significance value of 0.000 < 0.05 and a regression coefficient of -2.695, indicating that every 1% increase in KUR loans decreased profitability by 2.695. Abdullah, et al. (2021) and Hutabarat, et al. (2023) stated that business credit has a significant impact on business income, where sugarcane farmers who receive KUR are able to better manage production costs and ultimately increase their net profits.

Furthermore, based on the beta coefficient value, the variable that has the value furthest from zero is considered to have the most significant influence. In this study, the production variable with a beta coefficient of 5.123 was proven to be the most significant factor affecting profitability.

Partial Test (t-test)

In the analysis of the Partial Test data (t-test) figure 7, it was shown that the level of significance of the labor variable t calculated (1.122) < t table (1.663) and the variable yield t calculated (1.141) < t table (1.663), as well as the significance value of the labor variable (0.265) > 0.05 and the yield variable (0.257) >0.05. Meanwhile, the significant level of the production variable t calculated (7.686) > t table (1.663) and the variable of KUR loan t calculated (3.843) > t table (1.663), as well as the significance value of the production variable (0.000) < 0.05 and the KUR loan variable (0.000) < 0.05. So, the production variable and the KUR loan variable have an effect on profitability, as well as the labor variable and the yield variable have no effect on profitability. This indicates that increasing production volume and access to capital through KUR loans are the main factors in increasing the profitability of sugarcane farmers. This finding is in line with research in Bunga Mayang District which states that production and capital variables have a significant influence on sugarcane farmers' income (Santoso, 2019).

Simultaneous Test (F Test*)*

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	418.938	4	104.734	16.624	.000[b]
	Residual	535.518	85	6.300		
	Total	954.456	89			

Figure 7.
Simultaneous Test Results (F Test)
Source: Primary Data, 2025 (data processed)

Figure 8 shows the significance level of F calculated (16.624) > F table (2.712) and significance value (0.000) < 0.05, so it is concluded that the variables of labor, production, yield, and KUR loans have a significant effect simultaneously (together) on the profitability variable. However, the results of this study are different from the research conducted by Yanutya (2013) which states that simultaneously land area, capital, labor costs, education, age, and prices have a positive and significant effect on the income of sugarcane farmers in Jepon District, Blora Regency as evidenced by the results of the F test of 11,451.

Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.663[a]	.439	.413	2.51002

Figure 8.
Determination Coefficient Results
Source: Primary Data, 2025 (data processed)

The determination coefficient (Adjusted R Square) of 0.413 shows that the variables of labor, production, yield, and KUR loans together contribute 41.3% to the profitability of the sugarcane business. This contribution arises because these four variables represent a key aspect in the production and financing process, which directly affects farmers' yields and profits. Meanwhile, the remaining 58.7% were influenced by other factors outside the variables studied in this study. Labor affects the efficiency and quality of the production process, production determines the volume of crops sold, yield reflects sugar content that determines the quality and selling price of sugarcane, and KUR loans provide the capital needed for the purchase of production inputs. The combination of these factors directly increases production capacity and yield quality, thus having a positive impact on the profitability level of sugarcane farmers. The results of this study are in agreement with the research conducted by Lestari, et al. (2015) which shows that variables such as yield, labor costs, and access to credit (loans) have a significant effect on the profitability of sugarcane farmers. The study also confirmed that other factors such as age, farming experience, and education also affect profitability.

CONCLUSION

This study concludes that the partnership pattern of Independent People's Sugarcane (TRM) shows higher profitability compared to Credit People's Sugarcane (TRK).

The fundamental difference between these two patterns lies in the mechanism of disbursement of People's Business Loans (KUR). In the TRK pattern, KUR loans are distributed from banks to sugar mills first, then disbursed to farmers in stages. In contrast, in the TRM pattern, KUR loan disbursement is carried out directly from the bank to farmers, which gives farmers full control over their financial management.

The analysis shows that the average production cost per hectare for TRM farmers is IDR 54,117,516, lower than the TRK which reaches IDR 55,949,465. Meanwhile, the average TRM revenue is slightly higher, namely IDR 62,690,571 compared to IDR 62,745,555 in TRK. The combination of more efficient costs and better receipts makes TRM's average net profit reach IDR 8,573,055 per hectare, far exceeding TRK of IDR

6,796,090. TRM's profitability of 15.84% is higher than TRK's of 12.15%. This shows that TRM farmers are more able to achieve profitability from sugarcane farm enterprise.

The analysis of profitability factors also confirmed that of the four variables tested (labor, production, yield, and KUR loans), only the production variables and KUR loans had a significant influence. Of the two, the production variable is the most influential factor on profitability.

REFERENCES

Abdullah, M., Tamburaka, S., & Isda, I. (2021). Analisis Kredit Usaha Rakyat (KUR) Bagi Pengembangan UMKM di Kota Kendari (Studi Kasus pada Bank Sultra). *Jurnal Akuntansi Dan Keuangan*, *6*(2), 27–36. https://doi.org/10.33772/jak-uho.v6i2.22214

Arif, Hidayatullah, A. (2023). Analisis Komparatif Pendapatan dan Efesiensi Usahatani Tebu Rakyat Kredit dan Usahatani Tebu Rakyat Mandiri di Kota Kediri [Universitas Pembangunan Nasional "Veteran" Jawa Timur]. https://doi.org/http://repository.upnjatim.ac.id/id/eprint/16211

Astuti, T. N., Prasmatiwi, F. E., & Murniati, K. (2021). Efisiensi Teknis Usahatani Tebu Rakyat dengan Pendekatan Stochasic Frontier di Kabupaten Lampung Utara. *Journal of Food System & Agribusiness*, 156–165. https://doi.org/10.25181/jofsa.v5i2.1952

Badan Pusat Statistik. (2024). https://www.bps.go.id/id/publication/2024/11/29/71e6450a9b235855ffc525c9/statistik-tebu-indonesia-2023.html

Budi, N., Yusiana, E., & Budiandrian, B. (2024). Analisis Pola Kemitraan Petani Tebu (Saccharum officinarum Linn) di PT . PG Rajawali II Unit PG Subang. *Paspalum : Jurnal Ilmiah Pertanian*, *2*(2), 271–278. https://journal.unwim.ac.id/index.php/paspalum/article/view/744

Cahyani, W. K. D., Marimin, M., & Sukardi, S. (2017). Model Produktivitas Bagi Hasil Agroindustri Gula Tebu dalam Kemitraan antara Petani dan Perusahaan: Studi Kasus di PG Kremboong, Sidoarjo. *Jurnal Teknologi Industri Pertanian*, 27(2), 114–124. https://doi.org/10.24961/j.tek.ind.pert.2017.27.2.114

Dede, R. A. M. (2022). Analisis Usaha Tani Dalam Meningkatkan Produksi Padi DI Kecamatan Warungkondang Kabupaten Cianjur. https://repository.uinjkt.ac.id/dspace/handle/123456789/62192

Fauzi, J., Eliah, R., Daniswari, A., & Dwirayani, D. (2024). Efisiensi Teknis Usahatani Tebu di PT PG Rajawali II Unit PG Sindanglaut. *2*(1). *Journal Of Agricultural Sciences (Agrosci)* https://doi.org/10.62885/agrosci.v2i1.421

Hafsah, S. (2019). Peran Kredit Usaha Rakyat (KUR) Terhadap Pendapatan Petani Padi di Kecamatan Aluh-aluh Kabupaten Banjar. *Jurnal Frontier Agribisnis*, *3*(4), 184–191.

Hutabarat, B. A., Sartika, D., & Nofranita, W. (2023). Pengaruh Kredit Usah Rakyat (Kur) Terhadap Profitabilitas UMKM di Kota Palembang. *Jurnal Menara Ekonomi : Penelitian Dan Kajian Ilmiah Bidang Ekonomi*, *9*(1), 1–9. https://doi.org/10.31869/me.v9i1.4774

Khasanah, D. U. (2019). Pola Kemitraan Pemerintah Daerah Dengan Kelompok Sadar Wisata Pandawa Dieng Kulon dalam Pengembangan Pariwisata. *Journal of Politic and Government Studies*, 1–12. https://ejournal3.undip.ac.id/index.php/jpgs/article/download/25063/22315

Khowarizi, W. H., Handayani, M., & Imam, S. (2023). Faktor-Faktor yang Mempengaruhi Pendapatan Usahatani Tebu di Kecamatan Wedarijaksa Kabupaten Pati. Jurnal Ilmiah Mahasiswa AGROINFO GALUH, 11(2). 1285–1297. https://jurnal.unigal.ac.id/agroinfogaluh/article/view/12717

Kumalasari, A. D., Budiraharjo, K., & Setiadi, A. (2019). Komparasi Produksi dan Pendapatan Petani Tebu Mitra dan Non Mitra Pabrik Gula Rendeng di Kabupaten Kudus. *Agrisocionomics: Jurnal Sosial Ekonomi Pertanian*, *3*(1), 28–38. https://doi.org/10.14710/agrisocionomics.v3i1.4021

Laporan Kinerja Direktorat Tanaman Semusim dan Tahunan Tahun 2023. (n.d.). https://ditjenbun.pertanian.go.id/template/uploads/2024/04/LAKIN-DIRAT-TST-TAHUN-2023.pdf

Lestari, E. K., Fauzi, A., Hutagaol, M. P., & Hidayat, A. (2015). Keuntungan Petani Tebu Rakyat Melalui Kemitraan di Kabupaten Jember. *Buletin Tanaman Tembakau, Serat & Minyak Industri*, *7*(2), 79. http://repository.unej.ac.id/handle/123456789/80727

Masyhuri, Hani, P., & Hadfina, N. (2016). Comparative Study of Partnership Community Cane (TRK) and Self Community Cane (TRM) Farming With Madukismo Sugar Factory . Agritexts. 40 (2)91–97.

Masyhuri, Hartono, S., Rahayu, L., & Perwitasari, H. (2020). Comparative studies of partnership between Credit Farmers (Tebu Rakyat Kredit) and Independent Farmers (Tebu Rakyat Mandiri) with Pesantren Baru sugar factory in Kediri, East Java, Indonesia. *IOP Conference Series: Earth and Environmental Science*, *518*(1). https://doi.org/10.1088/1755-1315/518/1/012028

Melati, A. F., Bambang, S., & Dwi, S. (2024). Analisis Pengaruh Harga Tebu, Rendemen, Hasil Produksi, dan Biaya Produksi Terhadap Pendapatan Petani Tebu di Desa Krebet Kecamatan Bululawang. Jurnal Sosial Ekonomi Pertanian dan Agribisnis 1–11. https://jim.unisma.ac.id/index.php/SEAGRI/article/viewFile/26105/19794

Peraturan Gubernur Jawa Barat 2016. (n.d.). https://jdih.jabarprov.go.id/page/info/produk/8921?tentang=peraturan-gubernur-jawa-barat-nomor-64-tahun-2016-tentang-tugas-pokok-fungsi-rincian-tugas-unit-dan-tata-kerja-dinas-perpustakaan-dan-kearsipan-daerah-provinsi-jawa-barat

Puspita, A. D., & Ingesti, P. S. V. (2024). Analisis Usaha Tani pada Pola Kemitraan Petani Tebu Rakyat Mandiri dengan Pabrik Gula Madukismo (Studi Kasus di Kabupaten Bantul Daerah Istimewa Yogyakarta). *Prosiding Seminar Nasional Pembangunan Dan Pendidikan Vokasi Pertanian*, *5*(1), 1230–1244. https://doi.org/10.47687/snppvp.v5i1.1195

Rahma, L., Mayangsari, A., kunci, K., & Efisiensi, dan. (2018). Analisis Komparatif Pola Kemitraan Usahatani Tebu Antara Petani Tebu Rakyat Kredit (TRK) Dan Petani Tebu Rakyat Mandiri (TRM) (Studi Kasus Di Kabupaten Situbondo) Comparative Analysis Of Partnership Pattern Of Sugarcane Farmer Of The People Of Credit (TRK). *Jurnal Ilmiah Agribios*, *16*(2), 31–38.

Santoso, F. I. (2019). Analisis Pendapatan Usahatani Tebu di Kecamatan Bunga Mayang Kabupaten Lampung Utara Provinsi Lampung. *Journal of Economics Research and Social Sciences*, *3*(2), 103–109. https://journal.umy.ac.id/index.php/jerss/article/view/9908

Setiawan, R. F., & Hendrarini, H. (2024). Analisis Uji Beda Tingkat Efisiensi Usahatani Tebu Rakyat Kredit Dan Usahatani Rakyat Mandiri Di Kota Kediri. *Jurnal Ilmiah Sosio Agribis*, *23*(2), 94. https://doi.org/10.30742/jisa23220233504

Suaibatul, A. B. (2023). Faktor-faktor yang mempengarhi Pendapatan Petani Padi Sawah Di Desa Naga Timbul Kecamatan Tanjung Morawa Kabupaten Deli Serdang. https://repositori.uma.ac.id/handle/123456789/20931

Trieanto, P. F., Ismiasih, I., & Manumono, D. (2022). Tingkat Kepuasan Petani dan Strategi Keberlanjutan Kemitraan Inti-Plasma Kelapa Sawit di Kalimantan Barat. *Agrisintech (Journal of Agribusiness and Agrotechnology)*, *3*(2), 47–57. https://doi.org/10.31938/agrisintech.v3i2.393

Wahyuni, P. E. S., & Nursiam, N. (2025). The Effect of Transfer Pricing, Profitability, and Capital Intensity on Tax Avoidance (Empirical Study of Property and Real Estate Companies on the Indonesia Stock Exchange In 2020-2023. *Majapahit Journal of Islamic Finance and Management*, *5*(1), 1 – 20. https://doi.org/10.31538/mjifm.v5i1.354

Walyupin, W., Jamil, M., & Gustiana, C. (2018). Analisis Profitabilitas Usahatani Tebu (Saccharum Officinarum, L) di Kecamatan Bendahara Kabupaten Aceh Tamiang. *Jurnal Penelitian Agrisamudra*, *5*(2), 1–8. https://doi.org/10.33059/jpas.v5i2.861

Warsim, W., Titirloloby, P., & Ambarita, E. (2021). Loyalitas Petani Tebu terhadap Keberlanjutan Usaha Tani Tebu di Cirebon. *Paradigma Agribisnis*, *4*(1), 1. https://doi.org/10.33603/jpa.v4i2.5885

Yanutya, P. A. T. (2013). Analisis Pendapatan Petani Tebu di Kecamatan Jepon Kabupaten Blora. *Economics Development Analysis Journal*, *2*(4), 286–296. http://journal.unnes.ac.id/sju/index.php/edaj

Yusvianto, A. G., & Kuntadi, E. B. (2022). Persepsi Petani Tebu terhadap Penerapan Sistem Pembelian Tebu (Spt): Studi Kasus Di Kabupaten Situbondo. *JSEP (Journal of Social and Agricultural Economics)*, *15*(2), 229. https://doi.org/10.19184/jsep.v15i2.30397