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PERFORMANCE MEASUREMENT OF SUGARCANE FARMERS COOPERATIVE USING BALANCED SCORECARD METHOD

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ABSTRACT

As an organization that brings together sugarcane farmers, cooperatives of smallholder sugarcane farmers, partners of farmers certainly have: goals to be achieved, the achievement of cooperative goals required performance improvement. Performance measurement is conventionally measured from the financial side only while using the balanced scorecard method performance measurement is carried out on four perspectives, namely finance, customers, internal business, and growth and development. The purpose of this study is to analyze the performance of the Sugarcane Farmer Cooperative from a financial perspective, a customer perspective, an internal business process perspective, a learning & growth perspective. This research method uses performance measurement with the Balanced Scorecard (BSC) approach. The results showed that the measurement of performance from a financial perspective by analyzing the current ratio, debt to total ratio, ROE, ROA, and increasing SHU was considered not good. The customer perspective is analyzed with member satisfaction assessed by the Customer Satisfaction Index (CSI) method, member retention, member acquisitions as a whole are considered good. Performance measurement from an internal business perspective is related to innovation, operating processes, and rated well. From the perspective of development and growth, it is analyzed from the value of member retention, and the measurement of employee productivity is considered quite fair. The overall performance measurement of Mitra Tani Cooperative with the Balanced Scorecard is assessed as "Good Cooperative Performance".

KEY WORDS

Sugarcane, farmers, cooperative, performance measurement, balanced scorecard.

Indonesia is currently faced with the COVID-19 virus pandemic, where all business sectors are also feeling the impact, including the economic sector. Cooperatives are one of the businesses engaged in the economic sector. The people's sugar cane farmer cooperative is one of the cooperative organizations whose members are sugarcane farmers who carry out economic activities in the plantation sector. Mitra Tani Cooperative is one of the smallholder sugarcane farmer cooperatives in East Java, which was established in 1998 with 74 members. Mitra Tani Cooperative runs a business in the field of savings and loan units, transportation services, ratoon units, fertilizer sales, and agricultural machinery rental services. As one of the pillars of the economy in Indonesia, cooperatives certainly need to measure performance, this is done to maintain the stability of the performance of cooperatives to survive in the current situation and as a reference for improving future performance.

Measuring the performance of cooperative organizations is an important thing to do. Gaspersz (2002) explains that performance measurement is a way of monitoring and tracking the progress of an organization's strategic goals. Conventional performance measurement only measures from a financial perspective but in reality, effective performance measurement must measure both financial and non-financial terms. Performance measurement that is carried out only from a financial perspective has not been able to reflect the quality in a business organization (Tayler, 2009). Kaplan and Norton in 1992 developed and introduced the balanced scorecard method. Mulyadi (2001) states that the balanced scorecard is a tool for contemporary management to improve the company's ability to improve performance. The balanced scorecard assesses the performance of a company in



four different perspectives, namely: financial perspective, customer perspective, internal business process perspective, and learning and growth perspective (Kaplan and Norton, 2000).

Other studies that apply the Balanced Scorecard (BSC) method include the research of Permatasari, et al in 2016 applying the balanced scorecard method to the Savings and Loans Cooperative, Sari in 2017 applying to the Multipurpose Cooperative, Suseno. et al in 2018 and Herawati also in 2018 applied this method to the Village Unit Cooperative (KUD), and Suwendra in 2018 applied the balanced scorecard method to the Employee Cooperative. This study aims to measure the performance of the Sugarcane Farmers' cooperative by applying the balanced scorecard method. The measurement results by analyzing four perspectives namely financial perspective, customer perspective, internal business process perspective, and learning and growth perspective are expected to provide an overview of the state of the cooperative and identify areas of management performance that need to be improved. So that innovative suggestions for improvement can be designed to improve the performance of the Mitra Tani People's Sugar Cane Farmers Cooperative in the future.

METHODS OF RESEARCH

This study uses a descriptive method to measure the performance of cooperatives conducted at Mitra Tani Sugarcane Farmers Cooperation with a balanced scorecard approach. The use of the balanced scorecard method in measuring the performance of cooperatives in a balanced manner with four perspectives, namely finance, customers, internal business processes, and learning & growth perspectives.

The research location was chosen purposively in the Mitra Tani Sugarcane Farmers Cooperation, Mimbaan Village, Panji District, Situbondo Regency, East Java. The advantage is that this cooperative stands out in its savings and loan business, besides that this Mitra Tani Cooperative has a business unit for renting agricultural tools and machinery, leasing transportation services, warehousing, and storage.

The population in this study are sugarcane farmers who are members of the Mitra Tani cooperative with a total of 74 people, the core management of the cooperative, and the employees of the cooperative. Samples were taken from the existing population for further analysis. The sampling technique in this study uses purposive sampling, this is due to the tendency of researchers to choose key informants who are considered to know information and problems in-depth and can be trusted. The method of determining respondents for distributing questionnaires in measuring the level of satisfaction of both members is carried out using purposive sampling based on the purpose of taking respondents, namely from active members of the cooperative and members who have attended the Annual Member Meetings for the last two years. The first sample is the director, the finance department, and the workforce to find out about the condition of the cooperative, which amounts to 3 people in each cooperative, so the total sample is six people. The second sample is 30 customers or cooperative members.

Sources of data used in this study are primary data secondary data. Primary data, obtained from direct data sources, namely: leadership, finance department, cooperative workforce, and cooperative members in a way interview, questionnaire, and observation. Secondary data uses data from the last 3 years namely, 2018 until 2020 obtained from the Mitra Tani Cooperative in the form of financial report data, data on the number of cooperative members, data on the number of old business units, and new businesses or innovations carried out by cooperatives, data on the number of employees.

The data were analyzed using the balanced scorecard method with four perspectives, namely, financial perspective, customer perspective, internal business process perspective, learning and growth perspective.

Liquidity Ratio:

$$\text{current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \times 100\%$$



Solvency Ratio:

$$\text{Total Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}} \times 100\%$$

Profitability Ratio:

$$\text{ROE} = \frac{\text{Net Income (SHU)}}{\text{Total Equity}} \times 100\%$$

$$\text{ROA} = \frac{\text{Net Income (SHU)}}{\text{Total Asset}} \times 100\%$$

Financial ratio analysis is assessed based on Regulation Minister of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia Number: 06/Per/Dep.6/IV/2016 to measure the level performance of Sugarcane Farmers Cooperative Business Partners and Farmers Partners.

Increase in Remaining Operating Results (SHU):

$$\text{Increase SHU} = \frac{\text{SHU this year} - \text{SHU last year}}{\text{SHU last year}} \times 100\%$$

Measurement of customer satisfaction in this study using the method *customer Satisfaction Index* (CSI). The first step was to distribute questionnaires to 60 respondents who were active members of the cooperative. The preparation of the questions in the questionnaire uses five dimensions in service quality according to Rangkuti (2011), namely *reliability* (reliability), Responsiveness (responsiveness), Assurance (guarantee), Empathy (empathy), and Tangibles (physical evidence) Of the five dimensions of service quality measurement above, it is translated into a list of questions in the questionnaire and measured using a Likert scale (Sugiyono, 2016), The criteria for each question item answer are 5 = very satisfied, 4 = satisfied, 3 = quite satisfied, 2 = less satisfied, 1 = very dissatisfied.

The CSI value can be known by the following measurement steps:

1. Determine the Mean Importance Score (MIS) based on the average importance of each respondent;
2. Make Weight Factors (WF) which is the percentage of MIS value per attribute to the total MIS of all attributes;
3. Make a Weight Score (WS) which is the multiplication between WF and the average level of satisfaction (MSS);
4. Define CSI:

$$\text{CSI} = \frac{\sum_{i=1}^p \text{Wsi}}{H_s} \times 100\%$$

Determining the level of member satisfaction can be seen from the CSI value criteria. According to Simamora (2002) the CSI assessment criteria are as follows:

Table 1 – CSI Assessment Criteria

CSI Value	CSI Criteria
0.00-0.20	Very dissatisfied
0.21-0.40	Not satisfied
0.41-0.60	Quite satisfied
0.61-0.80	Satisfied
0.81-1.00	Very satisfied

Source: Simamora (2002).

Member Retention:

$$\text{Member Retention} = \frac{\text{Members who left}}{\text{Total members in the previous year}} \times 100\%$$



Member Acquisition:

$$\text{Member Acquisition} = \frac{\text{New members}}{\text{Total members}} \times 100\%$$

Measuring performance from the perspective of internal business processes in this study refers to Rangkuti (2011), namely Innovations carried out by cooperatives, Operations, After Sales Services.

Employee Retention:

$$\text{Employee Retention} = \frac{\text{Employee who left}}{\text{Total employee}} \times 100\%$$

Employee Productivity:

$$\text{Employee Productivity} = \frac{\text{Net Income (SHU)}}{\text{Total Employee}} \times 100\%$$

According to Mulyadi (2002), the balance criterion is used to measure the extent to which our strategic goals are balanced across all perspectives. The score in the balance criteria table is the standard score if the performance of all aspects of the company is "good". Scores are given based on the following rating scale:

Table 2 – Rating Scale

Score	Score
-1	Less
0	Adequate
1	Good

Source: Mulyadi (2002).

The assumption used for this research is the performance of each benchmark. Performance can be said to be "good" if it experiences a significant increase from year to year. Meanwhile, the performance is said to be "adequate" if the performance has increased, but is not significant and the performance is considered "less" if it has decreased from year to year. After measuring each perspective by comparing data from year to year and analyzing existing data, the next step is to assess performance with a balanced scorecard. Determining the performance of the average score measurements scale:

LESS	ADEQUATE	GOOD
-1	0	1
0%	50%	80%

Figure 1 – Performance Scale (Source: Mulyadi, 2002)

The highest performance is the performance above 80% = an average score of 0.06 - 1.00 which indicates "Good Company Performance". The average performance is the performance between 50% - 80% = score 0 - 0.06 which indicates "Company Performance is Fairly Good". The lowest performance is performed less than 50% = score -1 - 0 which indicates "Poor Company Performance".

RESULTS AND DISCUSSION

The measurement of financial performance refers to the Regulation of the Minister of Cooperatives and Small and Medium Enterprises Number: 06/Per/Dep.6/IV/2016 concerning Cooperative Health, showing the following results.



Performance measurement from a financial perspective analyzed using the liquidity ratio shows the current ratio value in 2018 of 217.07%, decreased in 2019 by 189.53%, and increased in 2020 by 201.49%. If judged by the Rules Minister of Cooperatives and Small and Medium Enterprises Number: 06/Per/Dep.6/IV/2016 concerning Cooperative Health, the current ratio is 2018 and 2020 is in the healthy criteria, while in 2019 the criteria are quite healthy because the analyzed value is <200%. Assessment of financial performance using current ratio analysis shows that the cooperative's ability to meet debt or short-term obligations is good. The decrease in the value of the current ratio in 2019 was due to the amount of debt in 2019 being greater than 2018 and 2020, while the asset value was smaller than the previous year.

The measurement of the solvency ratio by assessing the debt to total ratio shows that in 2018 it was 90.21%, in 2019 it was 89.05%, and in 2020 it was 89.39%. Health criteria for cooperatives with a total debt ratio measurement of >40% per year, the results of the assessment on farmer partner cooperatives show that the measurements made in 2018 until 2020 are >40%, cooperatives are considered to be in a very unhealthy condition This means that more than 80%-90% of cooperative operations are financed by debt.

The measurement of the profitability ratio is assessed by Return on equity (ROE) and Return on assets (ROA), from the ROE assessment results, show results in 2018 of 18.36%, in 2019 decreased by 17.39%, and in 2020 also decreased by 16.33%. If you look at the results of the ROE assessment from 2018 to 2018, it has decreased, but the cooperative Health criteria, the ROE value which is in the range of 15-20%, is said to be quite healthy. This means that the ability of cooperatives to generate profits in the form of SHU is quite good, but it needs to be increased again.

The assessment on the Return on Assets (ROA) analysis shows the ROA value in 2018 of 1.80%, in 2019 of 1.90%, and 2020 of 1.73%. when compared to the standard cooperative assessment criteria, the Return On Assets in 2018, to 2020 is not, because the value is in the 1-2% range.

The assessment of the increase in SHU shows results in 2019 of 6.11% and in the year of decreasing -16.61. This SHU increase ratio is said to be good if it increases from period to period, but the analysis conducted on this farmer partner cooperative shows that from 2019 to 2020 there has been a very drastic decline. This is because the income of cooperatives always decreases due to delays in payment of farmers for services used, sugarcane farmers who transfer commodities from sugarcane to other commodities, resulting in reduced users of cooperative services.

Measurement of customer perspective using the Customer Satisfaction Index (CSI) method produces a CSI value of 83% or 0.83. In the CSI assessment criteria, the resulting value is in the range of 0.81-1, which means that cooperative members are very satisfied with cooperative services. The services provided in the form of fertilizer sales services, savings and loan services, transportation rental services, agricultural machinery services are very much in line with the expectations of cooperative members.

Assessment of member retention relates to the cooperative's ability to retain cooperative members. The number of cooperative members in 2018 was 41 people and the retention value was 4.88%, in 2019 it was 0% and in 2020 it was 0%. This means that the cooperative's ability to maintain its members is good because the number of members leaving is less than 10% of the total number of members.

The ability of cooperatives to increase the number of new members, by comparing the number of members in the previous year with the number of members for the current year. The results of the assessment of member acquisitions in 2019 amounted to 65.85% and in 2010 amounted to 8.82%. The acquisition value in 2019 was greater than in 2020 due to the addition of the number of cooperative members from 2018 to 2019 which amounted to 27 people, while from 2019 to 2020 only 6 people. The addition of the number of new members is not significant and the cooperative's performance assessment from the customer's perspective is assessed by the acquisition of members is not good.

Performance measurement from an internal business perspective is related to the innovations carried out by the cooperative, the operational processes carried out, and the



after-sales service of the cooperative. Innovations in the Mitra Tani cooperative from 2018-2020 in the form of services owned, namely savings and loan services, transportation rental services, agricultural equipment, and machinery services in the form of sugarcane harvesting machines and tractors, fertilizer sales services, loading, and ratoon maintenance services. Savings and loan services carried out by cooperatives are not only savings and loans but also in the form of fertilizer so that they help farmers if they have problems in financing sugar cane Mitra Tani Cooperative also implements programs from the government in the form of fertilizer assistance and funding. Rental services for tools and machines managed by the cooperative in the form of tractors, sugar cane cutting tools, and sugar cane harvesting machines, Promotional innovations carried out are in the form of a bonus of 1 hectare of tractor use if you have used the tractor 5 times. Innovations carried out by cooperatives are always increasing every year to retain members. Programs from the government in the form of fertilizer assistance for sugarcane treatment, from 2018 to 2020 the assistance continues to increase in number.

The operational process in running a cooperative business is in the form of services provided. Speed in providing information related to businesses owned, and programs provided by the government through cooperatives. The utilization of information technology in the delivery of information is also used. The operational process carried out by the cooperative is related to adequate work facilities, and the suitability of technology and information used, the location of the Mitra Tani Cooperative is easy to find because it is in a strategic location. The use of technology to support the cooperative's performance is sufficient, such as Wi-Fi, computers, and the installation of GPS on each tractor owned to make it easier to monitor the location and efficiency of tractor use.

After-sales service is related to complaints from members who use the services provided by cooperatives, so far member complaints are in the form of delays in the availability of fertilizers, inappropriate government programs, but cooperatives can overcome every complaint with good communication and find the best solution for members.

Table 3 – Summary of the Performance Measurement of Mitra Tani Cooperatives

Perspective	Year			Criteria	Weight
	I	II	III		
Financial Perspective:					
• Current Ratio	217.07%	189.53%	201.49%	Enough	0
• Debt Ratio	90.21%	89.05%	89.39%	Less	-1
• Return on Equity	18.36	17.39	16.33	Less	-1
• Return on Assets	1.80	1.90	1.73	Enough	0
• Improved SHU	15.66	6.11	-16.61	Less	-1
Customer Perspective:					
• Customer satisfaction	-	-	0.83	Good	1
• Customer Retention	95.12%	100%	100%	Good	1
• Customer Acquisition	-	65.85%	8.82	Enough	0
Internal Business Process Perspective:					
• Innovation	-	-	-	Good	1
• Operation	-	-	-	Good	1
• After-sales service	-	-	-	Good	1
Growth and Learning Perspective:					
• Employee Retention	100%	100%	100%	Good	1
• Employee Productivity	Rp. 18,173.333	Rp.19,073.333	Rp. 18,596,667	Enough	0
Total Score					3
Average score					0.14

Source: Data processed in 2021.

Performance measurement in the perspective of growth and development is assessed by employee retention, the number of employees from 2018 to 2020 in 3 people. The employee retention assessment is calculated by the number of employees leaving divided by the total number of employees multiplied by 100%. The value of employee retention from 2018 to 2019 is 100%, which means that the Mitra Tani cooperative's ability to maintain good employees.



Assessment of employee productivity by comparing the amount of income earned by the cooperative with the number of employees. Employee productivity in 2018 was Rp. 18,173,333, in 2019 it was Rp. 19,073,333, and in 2020 it was Rp. 18,596,667. The increase occurred from 2018 to 2019 and decreased in 2020. The cooperative's income decreased this was due to many sugarcane farmers who switched commodities grown into food crops, namely rice, damaged transportation so that their use was not optimal, and the sugarcane milling period was shorter than the previous year.

After measuring each perspective by comparing several previous periods, the next step is to assess performance with a balanced scorecard. The results of the performance appraisal are described in Table 3.

Table 3 shows the performance of cooperatives from the overall perspective used, namely financial perspective, customer perspective, internal business perspective, and learning & growth perspective. After being given a score for each assessment item, then the total and the average score is taken to get a value of 0.23. The average score is in the range of 0.06 - 1.00 which means "Good Cooperative Performance".

Another study conducted by Permatasi in 2016 by applying the Balanced Scorecard method measured through four perspectives shows that the performance of the Kopari Savings and Loans Cooperative in 2014 can be started well. The performance assessment conducted by Adana in 2019 at the *BUMDes* Panggung Lestari showed that the performance was in the category very healthy.

CONCLUSION

Financial Perspective Performance Measurement measured from the current ratio, debt to total ratio, return on equity (ROE), return on assets (ROA), and the increase in the remaining operating results (SHU) overall is considered not good. Customer perspective is measured from member satisfaction with the Customer Satisfaction Index (CSI) method, member retention, member acquisition which is considered good. The measurement of performance in the internal business perspective is measured by the innovation of Mitra Tani cooperative, and the overall after-sales service measurement of the internal business perspective is considered good. Measuring the perspective of development and growth with employee retention and employee productivity is considered quite fair.

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