

THE ROLE OF MANAGEMENT ACCOUNTING SYSTEMS IN IMPROVING THE PERFORMANCE OF CULINARY MSMEs: MODERATION OF SUSTAINABILITY REPORTING

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Abstract

This study aims to analyze the influence of management accounting systems on the performance of culinary MSMEs and test the role of sustainability reporting as a moderation variable. The research uses a quantitative approach with a survey method of 100 culinary MSMEs operating in the central area of Makassar City. Data were collected through a questionnaire with a Likert scale and analyzed using Structural Equation Modeling based on Partial Least Squares (PLS-SEM). The results of the study show that the management accounting system does not have a significant effect on business performance. This indicates that most MSMEs still do not make optimal use of accounting information in decision-making. Meanwhile, sustainability reporting has been proven to have a positive and significant influence on business performance. However, sustainability reporting is not able to moderate the relationship between management accounting systems and business performance. These findings show that sustainability practices have a more direct role in improving the performance of MSMEs compared to management accounting systems that have not been implemented effectively. This research contributes to the development of management and sustainability accounting literature, as well as provides practical implications for MSME actors in improving business performance through the integration of information systems and sustainable business practices.

Keywords: Management Accounting System, Business Performance, Sustainability Reporting, Msmes, Culinary

1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are strategic sectors in the global and national economy because of their contribution to job creation and increasing economic growth. Globally, MSMEs account for around 90% of total business and are the main source of labor absorption (World Bank, 2025). In Indonesia, the role of MSMEs is increasingly significant, especially in the rapidly growing culinary sector in various major cities, including Makassar City as one of the economic centers in the Eastern Indonesia region. Makassar City is known as a metropolitan city with high growth in the service and trade sectors, where culinary MSMEs are one of the main drivers of the local economy. Based on

data from the Makassar City Cooperatives and SMEs Office, the culinary sector dominates MSME activities due to high public demand and the development of an urban lifestyle that encourages the consumption of ready-to-eat food. However, the rapid growth is also followed by an increase in the level of competition between business actors, thus requiring MSMEs to have a sustainable competitive advantage.

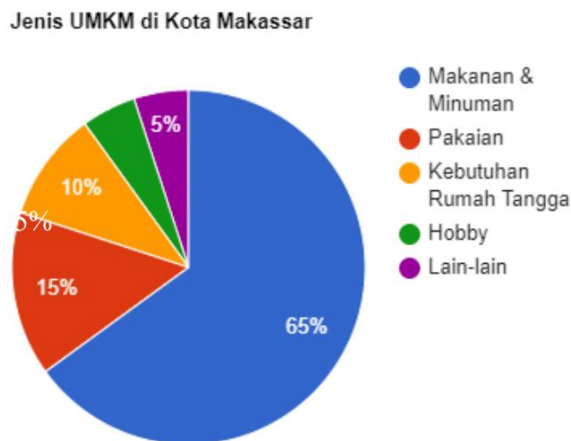


Figure 1. Types and Percentages of MSMEs in Makassar City in 2025

Source: Sanusi (2025)

In practice, many culinary MSMEs in Makassar City still face various fundamental problems, such as limited product innovation, weak cost management, and low ability to manage financial information systematically. This condition causes the business decision-making process to often not be based on accurate data, but on experience and intuition alone. In fact, in a competitive business environment, the ability to manage information is a key factor in improving business performance.

One of the instruments that can be used to improve the quality of decision-making is the management accounting system (MAS). MAS plays a role in providing relevant information related to costs, planning, control, and business performance evaluation that can help MSME actors in formulating more effective business strategies (Nartey & van der Poll, 2021). In addition, the implementation of a good management accounting system can also increase operational efficiency and help business actors in optimizing the use of resources (Ahmad et al., 2024). However, the implementation of MAS in MSMEs, especially the culinary sector, is still not optimal. Many business actors do not have a structured financial recording system and have not been able to utilize accounting information as a basis for

strategic decision-making. This causes the existence of a management accounting system to not always be directly proportional to the improvement of business performance, especially in MSMEs with limited managerial capacity and resources

On the other hand, the development of the modern business paradigm shows a shift from mere profit orientation to sustainability. Consumers and stakeholders are now increasingly paying attention to environmental and social aspects in business activities. In this context, sustainability reporting is one of the approaches that can increase transparency, reputation, and customer trust in the business (Ong et al., 2020). For culinary MSMEs, practices such as food waste management, the use of environmentally friendly raw materials, and energy efficiency can be an added value that increases business competitiveness. Theoretically, the integration between management accounting systems and sustainability reporting is expected to strengthen business performance. Accounting systems provide internal information for operational efficiency, while sustainability reporting increases external legitimacy through transparency and social responsibility. However, the results of previous studies show that the role of sustainability reporting as a moderation variable in the relationship between management accounting systems and business performance still shows inconsistent results, especially in the context of MSMEs that have informal characteristics and limited resources.

In addition, most research related to sustainability reporting still focuses on large companies or the manufacturing sector, while studies on MSMEs, especially the culinary sector in Indonesia, are still relatively limited. This condition shows that there is a research gap that needs to be filled, especially in understanding the role of management accounting systems and sustainability reporting in improving the performance of MSMEs in the local context. Based on this background, this study aims to analyze the influence of management accounting systems on the performance of culinary MSMEs and examine the role of sustainability reporting as a moderation variable. The results of the research are expected to make an empirical contribution to the development of management and sustainability accounting literature, as well as provide practical implications for MSME actors in improving business performance through strengthening information systems and sustainable business practices.

Hypothesis Development

The Management Accounting System (MAS) is an important tool in supporting managerial decision-making through the provision of relevant information, both in financial and non-financial form. In the context of culinary MSMEs, MAS plays a role in helping business actors understand the cost structure, manage inventory, and control operational expenses more efficiently.

Various practices in management accounting systems, such as activity-based costing and performance measurement systems, have been proven to be able to increase profitability and operational efficiency of businesses (Nartey & van der Poll, 2021; Odonkor et al., 2024). In addition, the use of MAS allows business actors to carry out budget planning, variance analysis, and performance evaluation in a more systematic manner. Furthermore, the integration of digital technology in the management accounting system also improves the quality of the information produced, so that business decisions can be taken more quickly and accurately (Ahmad et al., 2024; Rosmala, 2024). This is important in the culinary sector which has dynamic characteristics, especially in the face of changing consumer preferences and fluctuations in raw material prices.

In addition to supporting internal efficiency, MAS also assists MSMEs in managing operational risks, including supply chain uncertainty and changing economic conditions (Nair et al., 2022). Thus, the implementation of an effective management accounting system is expected to be able to improve business performance through more optimal resource management. However, the implementation of MAS in MSMEs is inseparable from various constraints, such as cost limitations, lack of managerial competence, and resistance to change (Amirgaliyeva et al., 2025). Therefore, the effectiveness of MAS in improving business performance is highly dependent on the organization's readiness to adopt and utilize the system optimally.

H1: The management accounting system has a positive effect on the performance of culinary MSMEs.

Sustainability reporting is a reporting practice that includes information related to environmental, social, and governance aspects carried out by a business. In recent years, sustainability reporting has not only been implemented by large companies, but also begun

to be adopted by MSMEs as part of a strategy to improve customer reputation and trust. *Sustainability reporting* has the potential to strengthen the relationship between management accounting systems and business performance. This is because sustainability reporting allows for the integration of financial and non-financial information, resulting in more comprehensive information in decision-making (Zik-Rullahi & Jide, 2023). With transparency related to environmental and social practices, business actors can increase their legitimacy and competitiveness in the market. In addition, the implementation of *sustainability reporting* can also improve cost efficiency through more sustainable resource management, as well as open access to green funding opportunities (Ong et al., 2020; Renaldo et al., 2024). In the context of MSMEs, sustainability reporting is becoming increasingly important because of the characteristics of a flexible business and close to the community. Practices such as food waste management, the use of local raw materials, and energy efficiency can be added values that increase the attractiveness of businesses in the eyes of consumers. Theoretically, sustainability reporting can function as a moderation variable that strengthens the influence of the management accounting system on business performance. In other words, the higher the level of implementation of *sustainability reporting*, the stronger the relationship between MAS and business performance will be

H2: Sustainability reporting moderates the relationship between the management accounting system and the performance of culinary MSMEs, where the relationship will be stronger at a high level of sustainability reporting.

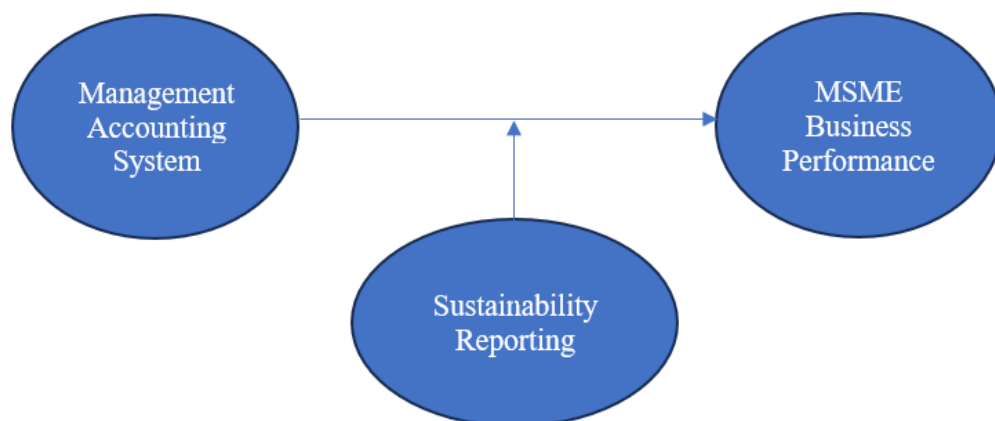


Figure 2. Conceptual Model

2. RESEARCH METHOD

This study uses a quantitative approach with a survey method to analyze the influence of management accounting systems on the performance of culinary MSMEs and test the role of sustainability reporting as a moderation variable. The research was conducted in Makassar City, South Sulawesi, which is one of the centers of economic growth in the Eastern Indonesia region with the dominance of MSME activities in the culinary sector. The object of the research is focused on culinary MSMEs operating in the central area of Makassar, such as Panakkukang, Rappocini, and Makassar Districts, which have dynamic business characteristics and a high level of competition.

The population in this study is all culinary MSMEs in Makassar City, with sampling techniques using purposive sampling. The respondents' criteria include business actors engaged in the culinary sector, have been running a business for at least one year, and have an understanding of the business operations being run. Based on these criteria, as many as 30 culinary MSMEs were obtained as research samples. This number is considered adequate because the *Partial Least Squares* (PLS) method can be used on small sample sizes and is still able to produce stable estimates.

Data collection is carried out through the distribution of questionnaires to business owners or managers, either directly or through *online media*. The research instrument was compiled using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Before use, the questionnaire was tested on a limited basis to ensure the clarity and suitability of the indicators in the context of culinary MSMEs. The variables in this study consist of management accounting system as an independent variable, business performance as a dependent variable, and sustainability reporting as a moderation variable. Variable measurement was carried out by adapting indicators from previous research that were relevant to the context of MSMEs.

Data analysis was carried out using *the Structural Equation Modeling* approach based on *Partial Least Squares* (PLS-SEM) with the help of SmartPLS software. This method was chosen because it is suitable for predictive research, has a relatively complex model, and does not require normal data distribution. The analysis process is carried out through two stages, namely the evaluation of the measurement model (*outer model*) and the

evaluation of the structural model (*inner model*). The evaluation of the outer model includes testing the convergent validity by looking at *the outer loading* and *Average Variance Extracted* (AVE) values, as well as reliability through *Cronbach's Alpha* and *Composite Reliability* values. Meanwhile, *the internal evaluation of the model* was carried out by testing the values of the determination coefficient (R^2), *effect size* (f^2), and *predictive relevance* (Q^2), as well as hypothesis testing using *the bootstrapping technique* with a significance level of 5 percent. Testing the effect of moderation is carried out by building an interaction between management accounting systems and sustainability reporting on business performance.

4. RESULTS AND DISCUSSION

Based on the results of data collection on **100 respondents** of culinary MSME actors in Makassar City, a fairly diverse picture of respondent characteristics was obtained. Based on gender, the majority of respondents were women as many as 60 people (60%), while men as many as 40 people (40%). This shows that women have a fairly dominant role in the management of culinary MSMEs in urban areas. Based on age, most of the respondents were in the age group under 30 years old as many as 55 people (55%), which shows that the culinary MSME sector is dominated by young productive age business actors. Further characteristics of the respondents can be seen in table 1 below.

Table 1. Respondent Characteristics

FEATURES	CATEGORY	QUANTITY	PERCENTAGE (%)
Gender	Women	60	60%
	Male	40	40%
AGE	< 30 years old	55	55%
	31–40 years	25	25%
	> 41 years old	20	20%
FINAL EDUCATION	SMA	15	15%
	Diploma	12	12%
	Bachelor	65	65%
	Magister	8	8%
EDUCATIONAL BACKGROUND	Management	40	40%
	Accounting	30	30%
	Economy	15	15%
LONG TERM OF EFFORT	Others	15	15%
	< 3 years	50	50%
	4–5 years	25	25%
	6–10 years	15	15%
	> 10 years	10	10%

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ANNUAL TURNOVER	< 100 million	55	55%
	100–500 million	35	35%
	> 500 million	10	10%
NUMBER OF BRANCHES	None	65	65%
	1–3 cabang	30	30%
NUMBER OF EMPLOYEES	> 3 branches	5	5%
	< 4 people	60	60%
	5–10 orang	30	30%
FRANCHISE	> 10 people	10	10%
	Ya	15	15%
	No	85	85%

The mean value for each construct indicates that the respondent gives a positive assessment of the variable being studied. The difference in average values between variables was relatively not too large, which shows a fairly uniform perception of respondents. The Management Accounting System variable has the highest average value of 4.30 with a standard deviation of 0.50, while the Business Performance variable has the lowest average value of 4.20 with a standard deviation of 0.56. Meanwhile, the Sustainability Reporting variable has an average value of 4.31 with a standard deviation of 0.48. A relatively moderate standard deviation value indicates that respondents' answers tend to be consistent and not spread out in extremes. In general, these results indicate that culinary MSME actors in Makassar City have a fairly good perception of the implementation of management accounting systems, sustainability practices, and business performance.

Table 2. Descriptive Analysis

CONSTRUCT	NUMBER OF ITEMS	NUMBER OF RESPONDENTS	MEAN	STANDARD DEVIATION
Management Accountin System	5	100	4.30	0.50
<i>Sustainability reporting</i>	9	100	4.31	0.48
Business performance	6	100	4.20	0.56

The results of the validity and reliability test show that all constructs in this study have met the required statistical criteria, so that they can be declared valid and reliable as a measuring tool. The outer loading value of most indicators is above 0.70 which indicates a good level of convergent validity. Although there are several indicators that have an outer loading value below 0.70 but still above 0.50, these indicators are still maintained because the *Average Variance Extracted (AVE)* value is above 0.50 and the *Composite Reliability (CR)* value has met the required minimum limit (Hair et al., 2022).

Table 3. Validity and Reliability Testing

VARIABEL	INDICATOR	OUTER LOADING	CR	AVE
Management Accounting System	SA1	0.878	0.932	0.734
	SA2	0.896		
	SA3	0.882		
	SA4	0.774		
	SA5	0.849		
SUSTAINABILITY REPORTING	LK1	0.747	>0.70	>0.50
	LK2	0.806		
	LK3	0.737		
	LK4	0.822		
	LK5	0.820		
	LK6	0.821		
	LK7	0.821		
	LK8	0.784		
	LK9	0.644		
BUSINESS PERFORMANCE	KU1	0.851	0.906	0.617
	KU2	0.757		
	KU3	0.788		
	KU4	0.790		
	KU5	0.802		
	KU6	0.721		

Overall, these results show that the research instruments used have met the standards of validity and reliability, making them suitable for further analysis in testing the relationships between variables in the research model.

The validity of the discriminator in this study was tested using the **Heterotrait-Monotrait Ratio (HTMT) approach**. The test results showed that all HTMT values were below the conservative limit of 0.90, so it can be concluded that each construct has a clear difference and there is no problem of discrimination between variables. The highest HTMT score is found in the relationship between Sustainability Reporting and Business Performance, but it is still within acceptable limits. Thus, all constructs in this research model can be declared to meet the criteria of discriminant validity.

Table 4. HTMT Ratio

VARIABEL	BUT	SR	BUSINESS PERFORMANCE
Management Accounting System (Mas)	-		
Sustainability Reporting (Sr)	0.82	-	
Business Performance	0.74	0.78	-

The results of the determination coefficient (R^2) test showed that the research model had a fairly good predictive ability. The R^2 value for the **Business Performance variable** is 0.55 which is included in the moderate category. This shows that around 55% of the variation in business performance can be explained by the variables of the management accounting system and sustainability reporting, while the rest is influenced by other factors outside the research model.

Table 5. R-Square Results

VARIABLE ENDOGENOUS	R ²	R ² ADJUSTED	REMARKS
Business Performance	0.552	0.537	Moderate

The path coefficient analysis in this study was carried out using *the bootstrapping* method with a two-tailed test at a significance level of 10% (0.10). A relationship between variables is declared significant if it has a **t-statistical value of > 1.65** and a **p-value of < 0.10** (Hair et al., 2022). The test results showed that the **Management Accounting System had no significant effect on Business Performance**, with a coefficient value of 0.261, a t-statistic value of 1.676, and a p-value of 0.094. Although the t-statistic value is close to the limit of significance, in practical terms the effect is relatively weak so the hypothesis is not supported. Furthermore, the **Sustainability Reporting variable was proven to have a positive and significant influence on Business Performance**, with a coefficient value of 0.517, t-statistic of 3.295, and p-value of 0.001. This shows that sustainability practices have an important role in improving the performance of culinary MSMEs. However, the results of the moderation test showed that **Sustainability Reporting was not able to moderate the relationship between the Management Accounting System and Business Performance**, with a coefficient value of 0.009, t-statistic of 0.094, and p-value of 0.925. Thus, the moderation hypothesis is not supported.

Table 6. Hypothesis Testing Results

Hipotesis	Hubungan	Coefficient (B)	T-Statistic	P-Value	Results
H1	Management Accounting System → Business Performance	0.261	1.676	0.094	Not Supported
H2	Sustainability Reporting → Business Performance	0.517	3.295	0.001	Supported
H3	Sustainability Reporting × MAS → Business Performance	0.009	0.094	0.925	Not Supported

DISCUSSION

The results of the study show that the management accounting system has not been able to have a significant influence on the performance of culinary MSMEs in Makassar City. These findings indicate that most MSME actors are still at the stage of simple financial management and have not utilized accounting information optimally in decision-making. This condition causes the existing accounting system to not be able to make a real contribution to improving business performance. This phenomenon is in line with the characteristics of MSMEs that tend to be flexible but less structured in administrative and financial management. In practice, many business actors rely more on experience and intuition than formal accounting data, so the benefits of a management accounting system have not been fully felt. On the other hand, sustainability reporting has been proven to have a positive influence on business performance. This shows that sustainability practices such as waste management, resource efficiency, and social responsibility can increase customer trust and strengthen business reputation. In the context of culinary MSMEs, the sustainability aspect is an added value that is directly felt by consumers, so that it has an impact on improving business performance. However, sustainability reporting is not able to strengthen the relationship between management accounting systems and business performance. This indicates that sustainability practices play more of an independent role as an independent factor that directly affects performance, rather than as a factor that strengthens the effectiveness of internal systems such as management accounting. Limited managerial capacity and the lack of integration of sustainability practices into the accounting system are one of the main causes of the insignificance of the moderation effect.

5. CONCLUSION

Based on the results of the research, it can be concluded that the management accounting system does not have a significant effect on the performance of culinary MSMEs in Makassar City. This shows that the application of the management accounting system in MSMEs has not been fully utilized as a basis for strategic decision-making, so its contribution to improving business performance is still limited. Furthermore, sustainability

reporting has been proven to have a positive influence on business performance. These findings indicate that sustainability practices, such as environmental management and social responsibility, can increase consumer confidence and strengthen business competitiveness in the culinary sector. However, sustainability reporting is not able to moderate the relationship between management accounting systems and business performance. This shows that sustainability plays more of an independent role as an independent factor that directly affects business performance, rather than as a factor that strengthens the effectiveness of internal systems such as management accounting. Overall, the improvement in the performance of culinary MSMEs in Makassar City is more influenced by external factors related to consumer perception and sustainability practices, compared to the use of management accounting systems that are still not optimal. Therefore, efforts are needed to increase managerial capacity and integrate accounting systems and sustainability practices in order to be able to have a more significant impact on business performance.

Suggestions

The next research is suggested to develop a research model by including other variables that can affect the effectiveness of the management accounting system in improving business performance. One aspect that can be studied further is the role of organizational characteristics, such as organizational culture, the level of digital literacy of business actors, and innovation orientation, which has the potential to be a determining factor in the successful implementation of a management accounting system. In addition, future research can also consider a more comprehensive approach by adding other mediation and moderation variables, such as the quality of human resources or digital technology support, to better understand the mechanisms that affect the relationship between management accounting systems and business performance. It is also recommended to use longitudinal research designs in order to observe the development of business performance and the implementation of management accounting systems in a sustainable manner in the long term. This approach is important to capture the dynamics of changes in the behavior of MSME actors and the impact of the implementation of managerial strategies more accurately.

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