MANAGEMENT ACCOUNTING SYSTEMS AND FIRM PERFORMANCE: THE MODERATING ROLE OF COMPETITIVE ADVANTAGE IN THE INDONESIAN CONSUMER GOODS INDUSTRY

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Abstract

This study aims to analyze and empirically prove the influence of the Management Accounting System on Company Performance moderated by Competitive Advantage in Companies in the Consumer Goods Industry Sub-Sector Registered in BEI the 2016-2018 period. The method used in this study is a quantitative method. The data used are sourced from primary and secondary data. The population in this study is all companies in the consumer goods industry sub-sector registered in BEI2016-2018. The sampling technique in this study uses the purposive sampling method is a sampling technique used based on the researcher's considerations when selecting samples. Data analysis and processing were carried out using Microsoft Excel and SPSS. The results of the research test indicate that: 1) The Management Accounting System (SAM) does not have a significant influence on Company Performance, 2) Competitive Advantage is able to moderate the influence SAMon Company Performance. Management needs to pay attention to SAM Although it does not affect company performance, at the 10% level, MAS shows an influence on company performance, meaning that improvements in the management accounting system are needed to improve company performance. Companies can use the information in MAS to observe their environment and determine any changes in the industry and their competitors' strategies, the greater the competitive advantage is able to strengthen the influence of MAS on company performance.

Keywords: Accounting System Management, Company Performance, Competitive Advantage

1. Introduction

Company performance represents a fundamental measure of organizational success, reflecting the extent to which a company effectively manages its resources to create value for customers and stakeholders (Antony & Bhattacharyya, 2010). This performance can be assessed through internal and external lenses, with internal assessment focusing on the contribution of various organizational units towards achieving both financial and overarching company objectives. A common and robust metric for this assessment is Return on Assets (ROA), a financial performance indicator that measures a company's efficiency in generating profits from its asset base. A higher ROA signifies more effective asset utilization, enabling greater profit generation from the same resource pool (Jahanshahi et al., 2011). This measure is often preferred as it better reflects the outcomes of managerial actions compared to market-based performance indicators (Hutchinson & Gul, 2004 in Gani & Jeremias, 2006).

In the contemporary, highly competitive business landscape, achieving and sustaining superior performance is intrinsically linked to a company's internal capabilities and

strategic positioning. A key internal facilitator is the Management Accounting System (MAS), which provides managers with crucial financial and non-financial information for decision-making, planning, and control. A well-designed MAS can significantly enhance managerial effectiveness, leading to improved operational efficiency and stronger competitive positioning, which ultimately impacts company performance (Chenhall, 2003; Ismail & Isa, 2011). This competitive advantage—a firm's ability to distinguish itself and withstand competitive pressures—can be manifested in various ways, such as through superior quality, cost leadership, or exceptional customer service (Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2006). In this study, competitive advantage is operationalized through the efficiency of asset utilization.

The urgency and rationalization for this research are twofold. First, the consumer goods industry in Indonesia, particularly the food and beverage sector, represents a critical and dynamic segment of the economy. Data from the Ministry of Industry (2019) highlights its robust growth, which at 7.91% in 2018, outpaced the national economic growth. This vibrancy makes it a compelling context to study the drivers of corporate success. Second, and more critically, existing empirical evidence presents a conspicuous research gap. While some studies, such as Wahyuni et al. (2016), found a significant positive effect of the management accounting system on company performance, others, like Sigilipu (2013), reported no significant effect. This inconsistency necessitates further investigation to clarify the role of MAS in enhancing firm performance, potentially by considering its interaction with strategic outcomes like competitive advantage.

Therefore, this study aims to re-examine the relationship between management accounting systems and company performance within consumer goods companies listed on the Indonesia Stock Exchange (IDX). It seeks to contribute to the literature by providing clearer empirical evidence from a high-growth industry and by exploring how the attainment of a competitive advantage might influence this relationship. The findings are expected to offer valuable insights for managers on leveraging information systems for strategic decision-making and for academics in reconciling previous contradictory findings. The article is organized as follows: after this introduction, a theoretical background and hypothesis development are presented, followed by the research methods, results and discussion, and finally, the conclusion, implications, and limitations.

2. Theoretical Background
2.1 Theoretical Foundation
This study is grounded in two primary theoretical frameworks that explain how internal resources and external communication influence a firm's success: Signaling Theory and Resource-Based Theory.
2.1.1 Signaling Theory
Signaling theory elucidates the actions taken by a company's management to convey signals about the firm's prospects to investors and other external stakeholders. These signals, which can be direct or require deeper analysis, are intended to alter the market's perception and valuation of the company. The core premise is that for a signal to be effective, it must possess sufficient informational power to convincingly change external parties' assessments (Spence, 1973). In the context of this research, a company's performance and its strategic use of management accounting information can be interpreted as powerful signals of its managerial efficiency and future potential.

2.1.2 Resource-Based Theory (RBT)

Resource-Based Theory (RBT) posits that a firm's sustainable competitive advantage is derived from its unique bundle of valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities (Barney, 1991). This theory, central to strategic management, argues that companies achieve superior performance not merely from positioning in external markets, but from developing and leveraging internal resources that are superior to those of competitors. A Management Accounting System (MAS) is one such strategic resource. According to RBT, a well-designed MAS can be a critical capability that enables a company to configure its resources more effectively than its rivals, thereby creating a competitive advantage (Cheng et al., 2010; Solikhah et al., 2010).

2.2 Hypothesis Development

2.2.1 The Influence of Management Accounting Systems (MAS) on Company Performance

A Management Accounting System (MAS) provides essential financial and non-financial information that aids managers in decision-making, planning, and control. By offering systematic and relevant data, a MAS enhances managerial effectiveness, leading to improved resource allocation and operational efficiency. In a challenging and competitive business environment, a robust MAS allows a company to navigate complexities, identify opportunities, and mitigate risks more effectively. This systematic support ultimately translates into enhanced company performance, as the organization can better execute its strategies and achieve its objectives (Chenhall, 2003; Ismail & Isa, 2011).

H1: Management Accounting System (MAS) has a positive effect on company performance.

2.2.2 Competitive Advantage as a Moderator of the Influence of MAS on Company Performance

The relationship between a MAS and firm performance can be strengthened by the presence of a competitive advantage. A MAS provides the informational foundation for managers to scan the competitive environment, understand industry dynamics, and anticipate rivals' moves. This information is crucial for formulating strategies that build a competitive edge, whether through cost leadership, differentiation, or focus. The competitive advantage achieved—for instance, through superior asset utilization efficiency—acts as a mechanism that amplifies the value derived from the MAS. The system's information becomes more potent when it is directly linked to creating and sustaining a unique market position. Empirical support for this moderating role is provided by Muthaher (2020), who found that competitive advantage enhances the effect of MAS on performance outcomes.

H2: Management Accounting System (MAS) has a positive effect on company performance when moderated by competitive advantage

3. Methods

3.1 Research Design

This study employs a quantitative approach with a causal-explanatory design. The research aims to examine the direct effect of the Management Accounting System (MAS) on Company Performance and the moderating role of Competitive Advantage in this

relationship. The study utilizes secondary data from the annual financial reports of consumer goods industry companies listed on the Indonesia Stock Exchange (IDX).

3.2 Population and Sample

The population of this study comprises all companies in the consumer goods industry subsector listed on the Indonesia Stock Exchange during the 2016-2018 observation period. The sampling technique used was purposive sampling, a method where sample selection is based on specific criteria determined by the researcher. The criteria for sample selection are as follows:

1) Consumer goods industry companies listed on the IDX consistently from 2016 to 2018.
2) Companies that published complete annual financial reports during the research period.
3) Companies with complete data required for the measurement of all variables in the study.

Based on these criteria, a final sample of 102 company-year observations was obtained for data analysis.

3.3 Data Collection Technique

Data were collected through the documentation method by sourcing:

1) Annual financial reports from the official website of the Indonesia Stock Exchange (www.idx.co.id).
2) Financial statement notes and management discussion sections from company annual reports to gather supporting information.

All collected data were verified for completeness and consistency before being processed.

3.4 Operational Definitions and Variable Measurement

The variables in this study are operationally defined and measured as follows:

1) Company Performance
   Company performance is the outcome of a company's ability to manage its resources effectively. According to Hery (2016, p. 106), "Return on assets is a ratio that shows how much the asset contributes to creating net profit." This study uses Return on Assets (ROA) as a proxy for financial performance. A higher ROA indicates better company performance. ROA is calculated using the formula from Kasmir (2016, p. 202):

$$ROA = (Net\ Income\ /\ Total\ Assets) \times 100\%$$

2) Management Accounting System (MAS)
   A Management Accounting System (MAS) is the application of techniques and concepts to process historical and projected economic data, aiding management in planning and rational decision-making to achieve economic goals (Kamaruddin, 2007, p. 5). The MAS variable is measured using a composite index based on the level of sophistication and the presence of specific management accounting techniques (e.g., budgeting systems, cost management systems, performance measurement systems) as disclosed in the company's annual reports.

3) Competitive Advantage
   Competitive advantage is a set of factors that differentiate a company from its competitors, granting it a unique position in the market (Djafri, 2016, p. 47). In this

study, competitive advantage is proxied by Asset Utilization Efficiency, which reflects a company's ability to generate revenue from its asset base. It is measured using the formula:

Asset Utilization = (Total Sales / Total Assets) × 100%

A higher ratio indicates a stronger competitive advantage derived from operational efficiency.

3.5 Data Analysis Technique

The data analysis technique used is Moderated Regression Analysis (MRA) with the following model specifications:

1) Model 1 (Direct Effect):
   Company Performance = α + β₁MAS + ε

   In LaTeX: $Company\ Performance = \alpha + \beta_1 MAS + \varepsilon$

2) Model 2 (Moderating Effect):
   Company Performance = α + β₁MAS + β₂Competitive_Advantage + β₃(MAS × Competitive_Advantage) + ε

   In LaTeX: $Company\ Performance = \alpha + \beta_1 MAS + \beta_2 Competitive\_Advantage + \beta_3(MAS \times Competitive\_Advantage) + \varepsilon$

   Where:
   MAS = Management Accounting System
   MAS × Competitive_Advantage = Interaction term between MAS and Competitive Advantage

Data processing will be performed using statistical software with a significance level of 5% ($\alpha = 0.05$). Classical assumption tests will be conducted beforehand to ensure the validity of the regression model.

4. Results and Discussion

4.1 Descriptive Statistical Analysis

Table 1 presents the descriptive statistics for the research variables, providing an overview of the data distribution for the 102 observations.

Table 1. Descriptive Statistics Result

Variable	N	Minimum	Maximum	Mean	Std. Deviation
ROA	102	0.90	92.10	11.9812	12.91291
KB	102	0.15	3.10	1.1920	0.59680
SAM	102	2.99	4.77	3.8047	0.37541

Source: Processed research data (2024)

The results in Table 1 show that the Return on Assets (ROA) variable has a minimum value of 0.90%, a maximum value of 92.10%, and an average of 11.98%. The standard deviation of 12.91% is greater than the mean, indicating a high level of variation in the profitability data among the sampled companies. This suggests an uneven distribution of ROA across the consumer goods industry. In contrast, the Management Accounting System (SAM) and Competitive Advantage (KB) variables show a mean value greater than their standard deviations, indicating a more consistent and evenly distributed data pattern for these variables.

4.2 Classical Assumption Tests

To ensure the validity of the regression model, a series of classical assumption tests were conducted.

4.2.1 Normality Test

The normality of the data was assessed using the Kolmogorov-Smirnov test. The test results indicated that the significance values for the natural logarithm of ROA (LnROA)

and the natural logarithm of SAM (LnSAM) were greater than 0.05. This confirms that the data for the dependent and independent variables are normally distributed, fulfilling the normality assumption for regression analysis.

4.2.2 Heteroscedasticity Test

Heteroscedasticity was tested using a scatterplot of the regression standardized residuals. Figure 1 shows that the data points are randomly scattered both above and below zero on the Y-axis, with no clear pattern. This random distribution confirms that there is no heteroscedasticity issue in the regression model.
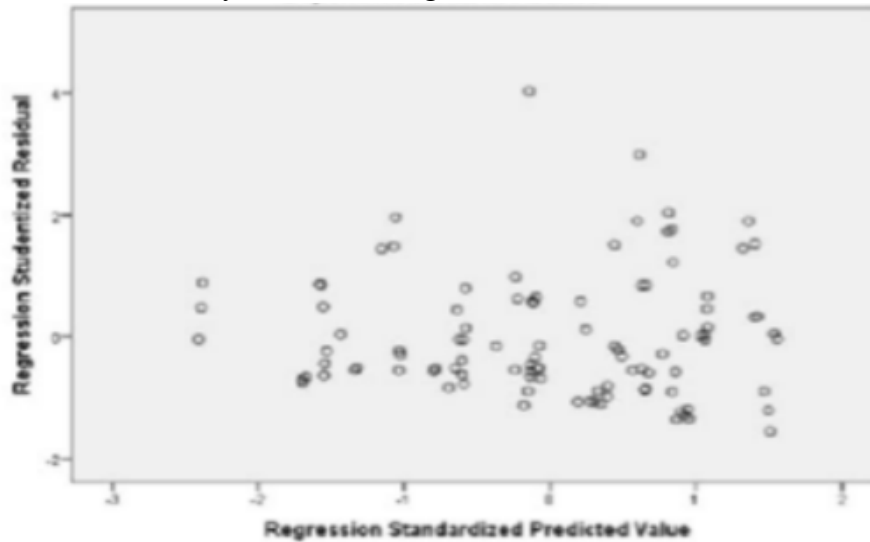

Figure 1. Scatterplot for Heteroscedasticity Test
Source: Processed research data (2024)

4.2.3 Multicollinearity Test

Multicollinearity was examined using the Variance Inflation Factor (VIF) and Tolerance values. A VIF value above 10 or a Tolerance value below 0.1 typically indicates multicollinearity. The results, presented in Table 2, show that all VIF values are well below 10 and all Tolerance values are above 0.1. Therefore, it is concluded that the regression model is free from multicollinearity problems.

Table 2. Multicollinearity Test Results

Model	Variable	Tolerance	VIF
1	LnSAM	0.840	1.190
	ModKB	0.840	1.190

Source: Processed research data (2024)

4.3 Multiple Regression Analysis
4.3.1 Coefficient of Determination (R^2) Test

The coefficient of determination (Adjusted R^2) is used to measure how well the independent variables explain the variation in the dependent variable. As shown in Table 3, the Adjusted R^2 value is 0.252. This means that 25.2% of the variation in Company Performance (ROA) can be explained by the combined variation of the Management Accounting System (SAM) and the moderating variable, Competitive Advantage (KB). The remaining 74.8% is influenced by other factors not included in this research model.

Table 3. Coefficient of Determination Test (R²)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.365	.270	.252	.81091	1.944

Source: Processed research data (2024)

4.3.2 F-Test (Simultaneous Significance Test)

The F-test was conducted to determine if the independent variables simultaneously have a significant effect on the dependent variable. Table 4 shows an F-value of 3.744 with a significance value of 0.027. Since the significance value is less than 0.05, the null hypothesis (H0) is rejected. This leads to the conclusion that the Management Accounting System (SAM) and Competitive Advantage (KB) together have a significant effect on Company Performance (ROA).

Table 4. F-Test Results (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2	4.923	3.744	.027b
	Residual	99	1.315		
	Total	101			

Source: Processed research data (2024)

4.3.3 t-Test (Partial Significance Test)

The t-test was used to examine the partial effect of each independent variable on the dependent variable. The results, presented in Table 5, provide the coefficients for the regression equation.

Table 5. t-Test Results and Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	1.723	1.125			1.532	.129
LnSAM	0.112	0.061	0.101		1.836	.059
ModKB (Moderating)	0.085	0.034	0.265		2.506	.014

Source: Processed research data (2024)

Based on the unstandardized coefficients (B) in Table 5, the regression equation can be formulated as follows:

Company Performance = 1.723 + 0.112(SAM) + 0.085(Moderated KB)

The analysis of the standardized coefficients (Beta) reveals that the moderating variable Competitive Advantage (KB) has a more dominant influence (Beta = 0.265) on Company Performance compared to the Management Accounting System (SAM) alone (Beta = 0.101).

4.4 Discussion

The results of the t-test show that the Management Accounting System (SAM) has a significance value of 0.059. This value is slightly above the 0.05 threshold, indicating that SAM does not have a significant positive effect on Company Performance (ROA) on its own. Therefore, Hypothesis 1 (H1) is not supported.

Conversely, the moderating variable of Competitive Advantage (KB) has a significance value of 0.014, which is less than 0.05. This confirms that Competitive

Advantage significantly strengthens the relationship between the Management Accounting System and Company Performance. The positive coefficient for the interaction term indicates that a higher level of competitive advantage enhances the positive impact of SAM on ROA. Thus, Hypothesis 2 (H2) is supported. This finding aligns with the Resource-Based Theory, suggesting that the MAS becomes a more potent strategic resource in creating value when it is effectively leveraged to achieve a superior market position through factors like asset utilization efficiency.

5. Conclusion

5.1 Summary of Findings

Based on the comprehensive data analysis conducted, this study concludes the following regarding the relationships between Management Accounting Systems (MAS), Competitive Advantage, and Company Performance within consumer goods companies listed on the Indonesia Stock Exchange:

1) The Direct Effect of Management Accounting Systems (MAS) on Company Performance

    The results of the partial significance test (t-test) yielded a t-value of |1.836| with a significance value of 0.059. As this significance value is greater than the 0.05 threshold, the first hypothesis (H1) is rejected. This indicates that the Management Accounting System (MAS) does not have a significant direct effect on Company Performance (proxied by ROA). This finding aligns with prior research by Sigilipu (2013), suggesting that the mere presence of a MAS is insufficient on its own to drive financial performance. It underscores the notion that managers must pay critical attention to the specific characteristics and the effective implementation of management accounting information to truly enhance efficiency and competitiveness.

2) The Moderating Role of Competitive Advantage

    The partial test for the moderating variable produced a t-value of |2.506| with a significance value of 0.014. Since this value is below 0.05, the second hypothesis (H2) is accepted. This provides strong evidence that Competitive Advantage (proxied by asset utilization efficiency) positively and significantly moderates the relationship between MAS and Company Performance. This result supports the findings of Muthaher (2020). The regression equation confirms that competitive advantage acts as a catalyst; companies that have achieved a strong market position are better able to leverage their Management Accounting Systems to enhance performance. In essence, a robust MAS contributes more effectively to profitability when it is used to support and maintain a definitive competitive edge.

5.2 Implications of the Research

The primary conclusion of this study is that a Management Accounting System does not directly enhance company performance but requires the presence of a strong competitive advantage to unlock its potential value. This highlights a critical interaction where the strategic positioning of a firm determines the effectiveness of its internal information systems.

5.3 Limitations and Suggestions for Future Research

This study has several limitations. First, its scope is confined to manufacturing companies in the consumer goods industry sector listed on the IDX from 2016 to 2018, which may limit the generalizability of the findings. Second, the use of secondary data

for variable measurement, while objective, may not fully capture the nuanced qualitative aspects of the Management Accounting System or the perceptions behind strategic decisions.

For future research, it is recommended to:

1) Expand the research objects to include other industries or service sectors to improve the external validity of the findings.
2) Incorporate additional mediating or moderating variables, such as innovation capability, leadership style, or external environmental factors, to develop a more comprehensive model explaining company performance.
3) Employ mixed-methods approaches, combining quantitative data with qualitative insights from surveys or interviews, to gain a deeper understanding of how MAS is implemented and perceived within organizations.

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