



The Effect Of Management Control Systems On Company Performance

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| ABSTRACT

This study aims to analyze the effect of the Management Control System (MCS) on firm performance. The research was conducted in manufacturing companies located in West Java, Indonesia, involving 73 respondents from various managerial levels. The data were analyzed using Structural Equation Modeling with the Partial Least Squares approach (SEM-PLS). This study was conducted because, although MCS is widely acknowledged as a crucial tool for aligning operational activities with strategic objectives, there is limited empirical evidence on how its implementation directly affects firm performance in Indonesian manufacturing companies, particularly in coping with dynamic market conditions, operational uncertainties, and the need for continuous innovation. The results indicate that the implementation of MCS plays a positive and significant role in improving firm performance. These findings highlight the importance for management to design, implement, and continuously refine adaptive, well-structured, and effective control systems that not only enhance operational efficiency and informed decision-making but also foster employee engagement, innovation, accountability, and long-term organizational resilience in a highly competitive and rapidly changing business environment.

| KEYWORDS

Management Control System; Firm Performance; Manufacturing

I. INTRODUCTION

Management accounting plays an important role in providing information that supports operational and strategic decision-making within organizations. This information enables managers to conduct performance evaluation, internal control, planning, and more accurate decision-making. In this context, the Management Control System (MCS) becomes a key instrument to ensure that organizational activities are aligned with strategic objectives and to enhance operational effectiveness. The effectiveness of MCS has been shown to have a direct impact on firm performance. Various studies indicate that well-designed control systems can improve resource-use efficiency, encourage innovation, strengthen organizational culture, and enhance the quality of decision-making [10][9][13]. Conversely, weak MCS implementation can lead to risks of deviation, financial losses, and even corporate bankruptcy, as evidenced by cases involving large companies in the industrial, banking, and pharmaceutical sectors. In addition, contextual factors such as organizational culture, business strategy, and environmental uncertainty play an important role in determining the effectiveness of MCS in improving firm performance. Thus, MCS functions not only as a monitoring tool but also as a strategic instrument to enhance organizational performance, strengthen competitiveness, and ensure corporate sustainability in the face of complex market dynamics.

Empirical studies show that Management Control Systems (MCS), corporate governance, organizational learning,

and product innovation have a positive influence on firm performance. [22] (finds that organizational learning and product innovation mediate the effect of MCS and corporate governance on the performance of SMEs in Malaysia [19] report that organizational culture and management control systems improve employee performance at TMA. The importance of communication, coordination, and risk management awareness in control practices, while [11] (2011) shows that accounting control systems are effective when environmental uncertainty is taken into account. [5] That MCS enhances employee motivation and firm performance, although motivation does not function as an intervening variable.

II. METHODOLOGY

This study employs a quantitative approach using a survey method to analyze the effect of Management Control Systems (MCS) on firm performance. The research population consists of manufacturing companies operating in West Java, Indonesia. A sample of 73 companies was selected using purposive sampling based on the following criteria: (1) actively operating for at least three years, (2) having implemented a management control system, and (3) willingness to complete the questionnaire. Data collection was conducted from August to October 2025.

Data were collected through a structured questionnaire using a five-point Likert scale (1-5) and were tested for validity and reliability prior to analysis. The data analysis was conducted using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with the assistance of SmartPLS software. The analysis was performed in two stages: first, testing the measurement model to ensure indicator validity and construct reliability; and second, testing the structural model to examine the effects of independent variables on the dependent variable using path coefficients, R-square values, and bootstrapping procedures for significance testing.

The research procedure began with the development of a questionnaire based on indicators of MCS and firm performance, followed by data collection from the selected sample. The collected data were then analyzed using SEM-PLS to assess the relationships among variables and to evaluate the role of MCS in improving firm performance. This method enables the study to obtain a systematic and measurable understanding of the influence of Management Control Systems on organizational performance within the context of manufacturing companies in West Java.

III. RESULTS AND DISCUSSION

Table 1. Results of Respondents' Scores
Category of Variabel Management Control System

No	Dimension	Number Of Responden (f)	Average Score	Category
Q1	Budget Accuracy Level	72	3,78	High
Q2	Frequency of Changes	72	3,03	Moderate
Q3	Participation in Budget Preparation	72	3,11	Moderate
Q4	Key Performance Indicators (KPIs)	72	4,07	High
Q5	Individual Performance Appraisal	72	4,11	High
Q6	Periodic Performance Reporting	72	4,01	High
Q7	Compliance with Internal Control Procedures procedures.	72	4,22	Very High
Q8	Frequency of Internal Audits	72	3,96	High
Q9	Participation in Budget Preparation	72	3,42	High
Q10	Key Performance Indicators (KPIs)	72	3,92	High
Q 11	Individual Performance Appraisal	72	3,86	High
Q 12	Pemantauan dan Pelaporan Risiko	72	3,96	High

$$3.78 + 3.03 + 3.11 + 4.07 + 4.11 + 4.01 + 4.22 + 3.96 + 3.42 + 3.92 + 3.86 + 3.96 = 45.45$$

Overall mean score = $45.45 / 12 \approx 3.79$ (High category)

Analysis of the Management Control Systems Variable

Based on the results of the study across twelve dimensions related to Management Control Systems, the overall mean score obtained was 3.79, which falls into the high category. This finding indicates that the organization has implemented internal control systems, performance reporting mechanisms, and risk management practices that are functioning effectively and appropriately.

The following section explains the results for each dimension:

The Budget Accuracy Level dimension obtained an average score of 3.78, categorized as high. This result indicates that the budgeting process is conducted with a good level of precision. The budget estimates prepared are relatively accurate and aligned with the organization's actual needs. This condition suggests that financial planning is supported by adequate data and analysis, enabling the budget to realistically reflect operational conditions.

The Frequency of Changes dimension recorded an average score of 3.03, which falls into the moderate category. This finding indicates that budget revisions still occur quite frequently. Such changes may be driven by external factors or internal policy adjustments that affect budget implementation. To enhance planning effectiveness, organizations need to strengthen monitoring mechanisms and improve forecasting accuracy so that budget changes can be minimized.

Furthermore, the Participation in Budget Preparation dimension recorded an average score of 3.11, which falls into the moderate category. This result indicates that the involvement of employees or work units in the budgeting process has not yet been optimal. The budgeting process tends to be top-down in nature, resulting in limited incorporation of input from operational-level staff. Increasing participation is expected to enrich the planning process and enhance a sense of responsibility for budget implementation.

The Key Performance Indicators (KPIs) dimension achieved an average score of 4.07, classified as high. This finding indicates that the organization has established an effective system of key performance indicators to measure the achievement of organizational objectives. The use of KPIs assists the organization in monitoring target attainment, measuring productivity, and objectively evaluating the effectiveness of work programs.

The Individual Performance Appraisal dimension obtained an average score of 4.11, which is categorized as high. This score suggests that the organization conducts individual performance evaluations on a regular, transparent, and fair basis. The appraisal process serves not only as a control mechanism but also as a foundation for employee development and the provision of performance-based rewards.

For the Periodic Performance Reporting dimension, an average score of 4.01 was obtained, placing it in the high category. This result indicates that the organization has implemented a consistent and routine performance reporting system. Such reporting provides a comprehensive overview of performance achievements in each period, enabling management to conduct evaluations and make data-driven decisions.

The Level of Compliance with Internal Control Procedures dimension recorded the highest average score, namely 4.22, which falls into the very high category. This finding demonstrates that the organization has a strong internal control system that is well adhered to by all employees. Compliance with policies, procedures, and monitoring mechanisms forms a critical foundation for maintaining organizational integrity and operational effectiveness.

The Frequency of Internal Audits dimension achieved an average score of 3.96, categorized as high. This result indicates that internal audits are conducted periodically and play an active role in ensuring compliance and detecting potential irregularities. Consistent implementation of internal audits supports transparency and accountability in organizational management.

The Number of Identified Fraud Cases dimension obtained an average score of 3.42, which is included in the high category. This value suggests that the organization has a relatively effective fraud detection and reporting system. Although some cases are still identified, this outcome reflects the effectiveness of monitoring mechanisms in detecting irregularities at an early stage.

In the Risk Identification and Assessment dimension, an average score of 3.92 was recorded, placing it in the high category. This finding indicates that the organization actively identifies potential risks arising from operational activities and conducts systematic risk assessments. This process supports the implementation of integrated risk management across organizational functions.

The Risk Control dimension obtained an average score of 3.86, categorized as high. This score demonstrates that the organization has effective mechanisms in place to control risks, both through preventive policies and the

implementation of mitigation procedures. These control measures help reduce the potential negative impacts of risks that may occur.

Finally, the Risk Monitoring and Reporting dimension recorded an average score of 3.96, which falls into the high category. This result indicates that the organization routinely monitors and reports risks to management. Information derived from the monitoring process is used to strengthen control measures and ensure organizational preparedness in addressing potential threats.

Overall, the findings indicate that the organization’s management control and performance systems are in the high category. This suggests that the organization has established effective and well-structured mechanisms for monitoring, reporting, and risk management. The most prominent dimension is the level of compliance with internal control procedures, reflecting strong and integrity-driven corporate governance. Nevertheless, the dimensions of participation in budget preparation and the frequency of budget changes require further attention. Organizations are encouraged to enhance employee participation in the planning process and improve budget accuracy to achieve more stable and efficient financial implementation.

**Table 2. Respondents’ Response Score Results
Company Performance Variable**

No	Dimension	Number Of Responden (f)	Average Score	Category
Q1	Defect Rate	72	3,60	High
Q2	Cycle Time	72	3,78	High
Q3	Process Innovation	72	3,94	High
Q4	Complaint Rate	72	3,58	High
Q5	Product Innovation	72	3,97	High
Q6	Training Intensity	72	3,83	High
Q7	Employee Turnover	72	3,61	High

Overall Average Score:

$$3.60 + 3.78 + 3.94 + 3.58 + 3.97 + 3.83 + 3.61 = 26.31$$

$$\text{Overall mean score} = 26.31 / 7 = 3.76 \text{ (High category)}$$

Analysis of Firm Performance Variable :

Based on measurements across seven dimensions related to production performance and product innovation, the overall mean score obtained was 3.76, which falls into the high category. This result indicates that the organization has implemented effective production and innovation processes with satisfactory performance.

The Defect Rate dimension recorded an average score of 3.60, categorized as high, indicating that the level of defective products in the production process is relatively low and well controlled. This condition reflects adequately maintained product quality, which helps minimize losses resulting from defective products.

In the Cycle Time dimension, an average score of 3.78 was obtained, also classified as high. This finding suggests that the production process operates with good time efficiency, enabling the organization to meet production targets according to the planned schedule. Effective control of cycle time contributes to increased productivity and reduced production costs. The Process Innovation dimension achieved an average score of 3.94, indicating that the organization is fairly active in implementing innovations in production processes. Such innovations contribute to improvements in quality, efficiency, and production flexibility, which ultimately support product competitiveness in the market.

The Customer Complaint Rate dimension recorded an average score of 3.58, which falls into the high category. This result indicates that the level of customer complaints is relatively low, reflecting customer satisfaction with the products delivered. The organization is also capable of responding to and resolving complaints effectively.

The Product Innovation dimension obtained the highest average score of 3.97, indicating that the organization is highly active and consistent in developing new products or improving existing ones. Product innovation plays a crucial role in maintaining competitiveness and meeting the demands of a dynamic market.

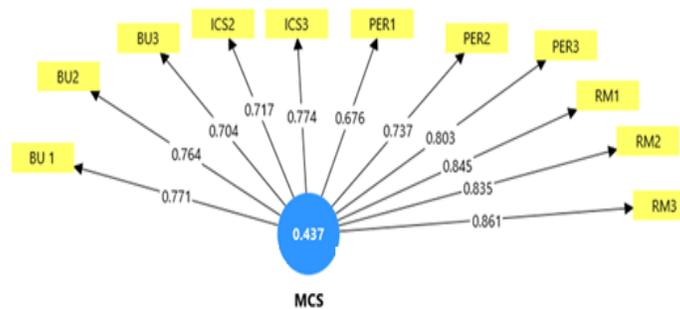
The Training Intensity dimension recorded an average score of 3.83, indicating the organization’s strong attention to improving employee competencies and skills. Effective training programs play an important role in supporting the implementation of innovation and enhancing production quality.

Finally, the Employee Turnover dimension obtained an average score of 3.61, which falls into the high category. This result indicates a relatively low and stable level of employee turnover, reflecting a conducive work environment and sound human resource management practices.

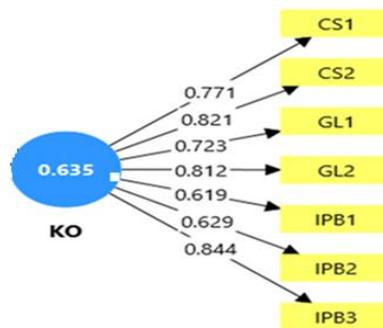
these findings demonstrate that the organization has been able to manage production and innovation aspects effectively, as reflected in product quality, production efficiency, high levels of innovation activity, and adequate human resource management. Continuous efforts to maintain and enhance these dimensions are necessary to ensure optimal production performance and sustained competitiveness in the market.

Table 3. R-square

	R-square	R-square adjusted
Company Performance	0.635	0.619
MCS	0.437	0.420



Picture 1. Loading Factors Management Control System



Picture 2. Loading Factors Firm Performance

Contingency theory states that there is no single best managerial approach applicable to all organizations, as management effectiveness depends on situational factors and the level of environmental uncertainty faced by the organization [7]. In the context of the manufacturing industry, environmental uncertainty often arises from fluctuations in market demand, supply chain disruptions, changes in industrial regulations, and advancements in production technology. These conditions require firms to dynamically adjust their strategies, structures, and operational systems in order to remain efficient and competitive.

In addressing such conditions, Management Control Systems (MCS) play an important role as adaptive mechanisms that help firms respond to change in a more structured and systematic manner [20] (Simons, 1995). Through instruments such as the Balanced Scorecard and Key Performance Indicators (KPIs), MCS enables manufacturing firms to translate efficiency and innovation strategies into concrete operational actions. These

systems also support early detection of potential deviations in production, quality, and cost performance, thereby allowing timely and effective corrective actions.

Furthermore, the implementation of participatory approaches in management control such as involving line supervisors and operators in the planning and target-setting processes enhances employee motivation and improves the accuracy of operational-level information, which is particularly critical under conditions of environmental instability.

Various empirical studies demonstrate a strong relationship between environmental uncertainty, Management Control Systems (MCS), and managerial performance. The environmental uncertainty has a significant effect on managerial performance through the role of management accounting systems. (the interaction between environmental uncertainty, business strategy, and accounting information has a positive impact on performance, particularly in manufacturing firms adopting a prospector strategy [9] The environmental uncertainty contributes 55.5% to the variation in managerial performance [18] . Meanwhile, The management control systems act as an important mediating variable in the relationship between environmental uncertainty and managerial performance [8].. Similar findings are also reported by [14] who state that competitive dynamics and environmental uncertainty affect the accuracy of control information and firm performance outcomes.

Thus, in the context of the manufacturing industry, which is characterized by rapid change and high uncertainty, the implementation of adaptive, participatory, and information-based MCS becomes a key factor in maintaining operational stability, cost efficiency, and sustainable firm performance. This approach is consistent with contingency theory, which posits that managerial effectiveness can only be achieved when control systems are aligned with external environmental conditions and dynamics.

IV. CONCLUSION

Contingency theory posits that there is no single best managerial approach for all organizations, as management effectiveness depends on the specific situation and the level of environmental uncertainty faced [7] . In the context of the manufacturing industry, environmental uncertainty often arises from market demand fluctuations, supply chain disruptions, changes in industrial regulations, and advancements in production technology. These conditions require firms to dynamically adjust their strategies, structures, and operational systems to remain efficient and competitive.

In addressing such situations, Management Control Systems (MCS) serve as critical adaptive mechanisms that help organizations respond to changes in a structured and systematic manner [20] . Through instruments such as the Balanced Scorecard and Key Performance Indicators (KPIs), MCS enables manufacturing firms to translate efficiency and innovation strategies into concrete operational actions. These systems also facilitate early detection of potential deviations in production, quality, and cost, allowing for timely and effective corrective measures.

Furthermore, implementing a participatory approach in management controlsuch as involving line supervisors and operators in planning and target-setting processesenhances employee motivation and improves the accuracy of operational-level information, which is particularly crucial in unstable and uncertain environments.

In management control, involving line supervisors and operators in the planning and target-setting processes has been shown to enhance employee motivation and improve the accuracy of operational-level information, which is particularly critical in unstable environments.

Empirical studies have demonstrated a strong relationship between environmental uncertainty, Management Control Systems (MCS), and managerial performance. that environmental uncertainty significantly affects managerial performance through the role of management accounting systems. further emphasized that the interaction between environmental uncertainty, business strategy, and accounting information has a positive impact on performance, especially in manufacturing firms adopting a prospector strategy [9]. The environmental uncertainty contributes 55.5% to variations in managerial performance. The management control systems serve as an important mediator in the relationship between environmental uncertainty and managerial performance [8]. Similar findings were reported by [14], who noted that competitive dynamics and environmental uncertainty influence the accuracy of control information and firm performance outcomes.

The context of the manufacturing industry, which is characterized by rapid changes and high uncertainty, implementing adaptive, participatory, and information-based MCS is key to maintaining operational stability, cost efficiency, and sustainable firm performance. This approach aligns with contingency theory, which posits that

managerial effectiveness can only be achieved when control systems are tailored to the conditions and dynamics of the external environment.

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