

The Influence of Organizational Culture and External Environmental Uncertainty on Management Control Systems

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ABSTRACT

This study aims to analyze the influence of organizational culture and external environmental uncertainty on management control systems (MCS) in companies in West Java. The dynamics of business competition and environmental changes demand that companies have adaptive and responsive management control systems. The research employs a quantitative approach with 72 respondents representing various managerial levels within companies in West Java. Data collection techniques involved surveys using both physical distribution and online (Google Forms), while data analysis utilized Structural Equation Modeling based on Partial Least Squares (SEM-PLS). The results indicate that organizational culture significantly influences the implementation of management control systems. Similarly, external environmental uncertainty also proves to affect management control systems. These findings reinforce contingency theory, which emphasizes the importance of aligning internal and external organizational factors to determine the effectiveness of management control systems. The practical implications of this research suggest that companies in West Java should strengthen the organizational values that encourage openness, innovation, and shared commitment, thereby enhancing the effectiveness of management control systems. Additionally, companies need to improve their adaptability to external environmental changes, including market dynamics, regulations, and technological developments. This study is expected to contribute theoretically to the literature on the impact of organizational culture and environmental uncertainty on the effectiveness of management control systems, and serve as a reference for practitioners to enhance company competitiveness.

Keywords: *organizational culture, external environmental uncertainty, management control system*

INTRODUCTION

Management Accounting plays a crucial role in generating internal reports that provide essential information for operational decisions, control systems, and strategic choices. The relevance of accounting data necessitates collaboration between the accounting department and others to ensure effective decision-making and evaluation. Within this framework, the Management Control System (MCS) emerges as a pivotal concept. MCS can be viewed through various lenses, including

Budgeting Implementation, Performance Measurement, Internal Control Systems, and Risk Management. It serves as an organizational tool to monitor performance, ensure operational effectiveness, and support strategic decision-making. Recent years have seen a significant transformation in business management, highlighting the importance of MCS in assessing organizational success. Proper management control ensures resources are utilized efficiently to meet organizational goals. As part of a broader information system, the Management Accounting and Control System (MACS) collects, processes, analyzes, and communicates critical financial and non-financial information to facilitate planning, monitoring, and control of activities. Despite its widespread implementation, the effectiveness and consistency of MCS often fall short, leading to potential deviations such as fraud and financial mismanagement. Numerous cases highlight that weak MCS implementation has contributed to corporate bankruptcies, underscoring the need for robust management practices. Effective MCS ensures alignment with overarching strategies and objectives, addressing challenges that can adversely affect a company's performance. Papiorek and Hiebl (2024) further discuss the impact of information systems quality on management accounting and control effectiveness, emphasizing the vital link between effective oversight and organizational success. Internal control issues have also emerged within a state-owned enterprise (BUMN) in the pharmaceutical sector, which was found to be involved in unofficial online lending practices. Shadiq (2024) states that these loans were not utilized for the company's benefit, leading to potential losses amounting to billions of rupiah. Yeliandriani (2024) adds that the *modus operandi* involved using employee identities as borrowers, along with placing personal deposits as collateral, ultimately resulting in default. These findings highlight weaknesses in control systems and integrity at the managerial level. This situation has drawn public and expert attention, including Pranoto (2024), who notes that this BUMN case reflects poor internal oversight despite existing regulations and standard operating procedures (SOP) from the Ministry of BUMN. Pranoto (2024) emphasizes the lack of capability and commitment among individuals in supervisory positions, including the roles of the audit committee and risk committee, which should be at the forefront of internal control. The pharmaceutical and financial sectors are also in crisis due to weak governance. The Financial Services Authority (OJK) revoked the operational licenses of several banks in early 2024. According to the Deposit Insurance Agency (LPS) report, this figure has reached the upper limit of the annual average. Sadewa (2024) argues that the primary cause lies in the mismanagement practices of bank owners. Meanwhile, in the insurance industry, Prastomiyono (2024) notes that many companies fell under scrutiny due to weak solvency ratios, liquidity, and investment adequacy. The national textile

industry has also faced the impacts of environmental uncertainty, with many firms struggling due to declining domestic demand and increasing preferences for imported products. For instance, PT “D” in Magelang was directly affected by the bankruptcy of Sritex due to high dependence on a single partner (Effran, 2024). Similar issues are manifesting globally. Tupperware Brands Corporation faces bankruptcy threats due to worsening financial conditions impacted by macroeconomic factors (Goldman, 2024). In Europe, Volkswagen AG plans to close several factories in Germany and implement mass layoffs. Cavallo (2024) notes that this step responds to high energy and labor cost pressures, along with increased competition from Asian manufacturers. Schaefer (2024) adds that productivity in Volkswagen’s German factories remains inefficient, with production costs being 25–50% higher than targets and even double that of international competitors in some locations. These cases reinforce the argument that the effectiveness of Management Control Systems plays a crucial role in maintaining organizational stability and sustainability. Failure to properly implement management control systems can have widespread consequences, not only financially but also regarding a company’s reputation and existence. In addition to these issues, research concerning Management Control Systems (MCS) shows significant findings. Ilias (2015) found that both external and internal controls significantly impact financial performance, service quality, and procedure implementation. Informal internal control only had a significant relationship with service quality performance. This study also indicates that external control, through formal internal control, has a stronger connection to the performance dimensions of a company compared to the direct relationship between external control and performance. Another study conducted by Ernawati (2005) found that information from management accounting systems, business strategy, and environmental uncertainty positively and significantly influenced managerial performance. Hatane (2019) provides managers with insights on the types of control commonly used at each stage of the Organizational Life Cycle, emphasizing the need for managers to decide on appropriate Management Control Systems (MCS) to effectively manage strategies for their companies. Felício, Samagaio, and Rodrigues (2021) highlight the importance of adopting management control systems for improving performance in public sector organizations. Organizational culture, management control systems, and internal control systems impact the performance of telecommunications companies. Karsam (2017) found that the implementation of Management Control Systems positively and significantly affects firm performance, while employee motivation also positively influences firm performance. However, employee motivation does not significantly mediate the relationship between Management Control Systems and firm performance. Osma, B. G et al. (2022) provide evidence that the four contingent variables

significantly influence the design and operational details of control systems, highlighting the need to refine the definitions of these variables in the public sector context (Woods, 2007). The implementation of management control systems significantly affects the performance of PT Petrokimia Gresik, where ecosystem management and leadership style do not enhance managerial performance (Choiri, C et al., 2023). The research indicates that the implementation of organizational culture in higher education institutions serves to define their identity. Additionally, organizational culture affects universities through verbal values and established regulations. The implementation of control systems in higher education focuses on mitigating risks and threats from both internal and external sources, as well as enhancing quality, which is evaluated through accreditation results. Good governance leads to positive outcomes, while poor governance that fails to adhere to established rules and standards may lead stakeholders, as primary investors, to assess the institution's viability (Wahyudi, I et al., 2021).

In specific contexts such as Indonesia, other components like cultural context, collectivism, leadership, and ethnic groups are significant factors in Management Control Systems (MCS), especially in small family-owned manufacturing businesses. Generic Management Control Systems have limited implications for performance improvement. However, much of the literature studying Indonesian SMEs finds that socio-economic environments influence more than the designed procedural systems (Hermawan, 2018). Control systems using accounting information, as noted by Baird, K., Su, S., & Munir, R. (2019), function as accounting-based control systems. These accounting control systems effectively enhance corporate performance when managers account for environmental uncertainties. Managers must act conservatively in uncertain environments and design control systems to navigate such uncertainties to achieve expected performance (Lesmana, 2011). Möller, K., Schäffer, U., & Verbeeten, F. (2020) indicate that digitalization has the potential to disrupt management accounting domains. Digitalization may not only affect the organizational and business landscapes related to business models but also influence management accounting practices and the roles of controllers and management. The procedural selection for audit companies is identified as an important practice in this research, but improvements are needed regarding the awareness of the importance of risk management and compliance programs to enhance overall governance quality. Various other factors that may emerge in control environment practices, such as corporate culture and political issues, require further exploration in the future (Arif, 2021). Management Control Systems (MCS) are designed to enhance organizational performance and innovation. Managers with positive characteristics, such as demonstrating good behavior through compliance with company

rules, engaging with their subordinates, and supporting subordinate ideas, can boost creativity and innovation among their staff (Nani, 2020). Organizational environmental uncertainties clearly affect the selection of management control systems, making information needs more detailed to maximize the functions of management control systems in rapidly changing environments (El Farabi, M. N., 2021).

The role of Management Control Systems (MCS) in supporting organizational goal achievement has become a critical focus in various contemporary management studies. MCS functions not only as an instrument for oversight and control but also as a strategic tool to align organizational activities with the company's vision and mission. Research conducted by Jukka (2020) contributes to the literature on management control and strategy by emphasizing the importance of aligning an organization's business strategy with the type of control system employed. His findings indicate that different business strategies yield better performance when matched with relevant types of MCS. This underscores that the design of control systems is crucial not just in implementation but also fundamental to the comprehensive management of business entities. A concrete example of MCS application is budgetary control. In this context, budget control serves as a performance measure that a superior can utilize either strictly or flexibly. The varied uses of the same measurement system will produce different impacts on the organization. Additionally, the implementation of internal control systems fosters organizational learning processes and product innovation, which significantly correlates positively with improvements in organizational performance. In this regard, Tyasari, I., Arshad, I., & Setiyowati, S. W. (2024) emphasize that MCS design, corporate governance, organizational learning, and product innovation play a significant mediating role in enhancing organizational performance, particularly in small and medium enterprises (SMEs) in Malaysia. Their research also underscores the need to consider both financial and non-financial aspects in MCS design. Organizational culture is another key element affecting the effectiveness of MCS and organizational performance achievement. Reza (2021) states that all dimensions of organizational culture influence various perspectives of organizational performance, especially regarding stability, competitiveness, and performance orientation. Organizational culture greatly impacts organizational processes, employee behavior, and the outcomes achieved. This is reinforced by findings from Einhorn, S., et al. (2024), which indicate that organizational culture and business strategy positively and significantly influence company performance. However, these findings also reveal that management control systems do not directly affect performance but rather serve as moderators in the relationship between business strategy and company performance. Meanwhile, the influence of MCS

on the relationship between organizational culture and managerial processes was not found to be significant. In terms of the relationship between organizational culture and forms of managerial control, Einhorn (2024) provides empirical evidence linking types of organizational culture, such as adhocracy, bureaucracy, clan culture, and market culture, with types of control such as action control, cultural control, personnel control, and result control. This research indicates that cultural differentiation has direct implications for how organizations build internal and external control systems. This study aims to investigate the influence of organizational culture and external environmental uncertainties on management control systems.

METHOD

This study employs a quantitative approach to conduct descriptive analysis and verify the relationships between independent variables—organizational culture and external environmental uncertainty—and the dependent variable, Management Control Systems (MCS). Specifically, the objective is to understand how these factors interact and influence each other within organizations that implement MCS. To gather data, I will utilize a structured questionnaire, which I will distribute both physically and through Google Forms. I will target leaders, managers, and staff from various organizations as respondents, ensuring a diverse perspective on the issues at hand. The selection of respondents is crucial as it will provide insights from those directly involved in the implementation and operation of MCS.

To ensure the integrity and reliability of the data collected, I will perform several validity and reliability tests. Validity testing will involve expert evaluations to confirm that the questionnaire accurately measures the intended constructs. I will also assess construct validity using factor analysis to ensure that the items align with theoretical expectations. For reliability, I will calculate Cronbach's alpha to evaluate the internal consistency of the questionnaire items, ensuring that they reliably measure the specified constructs. For the analysis of the collected data, I will apply Structural Equation Modeling (SEM) with Partial Least Squares (PLS), a technique well-suited for exploring complex relationships among variables. This method will allow me to measure loading factors for each variable (Outer Model) and evaluate the influence of exogenous variables on endogenous variables (Inner Model). Additionally, I will analyze key indicators related to MCS that include budgeting accuracy, the frequency of budget updates, participation in budgeting, key performance indicators (KPIs), and the overall stability of internal control systems.

RESULTS AND DISCUSSION

The Organizational Culture variable consists of seven indicators: Innovation and Risk Taking, Attention to Detail, Outcome Orientation, People Orientation, Team Orientation, Aggressiveness, and Stability. I will measure each of these indicators using seven questions designed to assess the presence and impact of these cultural traits within the organization.

These questions will help gather information on how the organization promotes innovation, values attention to detail, focuses on achieving outcomes, prioritizes employee well-being, emphasizes teamwork, displays competitive spirit, and maintains stability in its operations. The collected responses will provide a comprehensive understanding of the organizational culture and how it influences overall performance and effectiveness.

Table 1. Respondent Score Results Organizational Culture Variable

Item Statement Dimension	Answer Choices	Score Weight	f	%	Actual Score	Category
P1 <i>Innovation and Risk Talking</i>		5	11	0,15	55	High
		4	33	0,46	132	
		3	22	0,31	66	
		2	6	0,08	12	
		1	0	0	0	
	Score		72	100%	250	
P2 <i>Attentions Detail</i>		5	15	0,21	75	High
		4	36	0,50	144	
		3	19	0,26	57	
		2	2	0,03	4	
		1	0	0	2	
	Score		72	100%	282	
P3 <i>Outcame Orientations</i>		5	11	0,15	55	High
		4	33	0,46	132	
		3	17	0,24	51	
		2	10	0,14	20	
		1	1	0,01	1	
	Score		72	100%	259	
P4 <i>People Orientation</i>		5	12	0,17	60	High
		4	40	0,56	160	
		3	15	0,21	45	
		2	5	0,07	10	
		1	0	0,00	0	
	Score		72	100%	275	
P5 <i>Team Orentation</i>		5	17	0,24	85	High
		4	34	0,47	136	
		3	15	0,21	45	
		2	4	0,06	8	
		1	2	0,03	2	
	Score		72	100%	276	
P6 <i>Aggresiveness</i>		5	17	0,24	85	High
		4	33	0,46	132	

P7 Stability		3	16	0,22	48	High
		2	6	0,08	12	
		1	0	0,00	0	
	Score		72	100%	277	
		5	12	0,17	60	
		4	33	0,46	132	
		3	24	0,33	72	
		2	1	0,01	2	
		1	2	0,03	2	
	Score		72	100%	268	

The indicator Innovation and Risk Taking received a score of 250, which falls into the high category. This is because both innovation and risk-taking are essential for a company, serving as key drivers for growth, competitiveness, and business sustainability. Stagnation and focusing solely on what is currently working will hinder long-term survival. Attention to Detail scored 282, also in the high category. This reflects the company's professionalism and commitment to excellence. Small things done correctly can significantly impact quality, trust, and growth. Outcome Orientation achieved a score of 259, categorizing it as high. The company being studied has clear goals and outcomes for both the overall organization and its individual units. People Orientation received a score of 275, again in the high category. This indicates that the company recognizes that people orientation is not just an HR strategy but also a foundation for a healthy and sustainable organizational culture. Team Orientation scored 276, categorized as high. The company has built a strong, adaptive, and innovative foundation. It emphasizes that the organization should not merely consist of a group of talented individuals, but rather form a cohesive team working as one unit. Aggressiveness has a score of 277, placing it in the high category. The company demonstrates courage, speed, and quick reactions in its operations. Stability scored 268, also categorized as high. The company has a mindset that views stability not as stagnation but as creating a solid foundation for growth, innovation, and endurance.

Table 2. Respondent Score Results External Environmental Uncertainty Variable

Item Statement Dimension	Answer Choices	Score Weight	f	%	Actual Score	Category
P1 Substitute Products		5	6	0,08	30	Moderate
		4	30	0,42	120	
		3	21	0,29	63	
		2	13	0,18	26	
		1	2	0,03	2	
	Score		72	100%	241	
P2 Number of Competitors		5	11	0,15	55	High
		4	34	0,47	136	
		3	13	0,18	39	
		2	12	0,17	24	

		1	2	0,03	2	
	Score		72	100%	256	
P3 Government Regulations		5	14	0,19	70	High
		4	27	0,38	108	
		3	22	0,31	66	
		2	7	0,10	14	
		1	2	0,03	2	
	Score		72	100%	260	
P4 Association Regulations		5	7	0,10	35	High
		4	33	0,46	132	
		3	19	0,26	57	
		2	11	0,15	22	
		1	2	0,03	2	
	Score		72	100%	248	
P5 Production Innovation		5	20	0,28	100	High
		4	35	0,49	140	
		3	12	0,17	36	
		2	5	0,07	10	
		1	0	0,00	0	
	Score		72	100%	286	
P6 Sales Innovation		5	20	0,28	100	High
		4	34	0,47	136	
		3	14	0,19	42	
		2	4	0,06	8	
		1	0	0,00	0	
	Score		72	100%	286	

The results indicate that the Substitute Products variable received a score of 241, categorizing it as moderate. This suggests that the company under study is aware of the potential threat posed by substitute products to their market share and profits. The Competitor Count scored 256, placing it in the high category, highlighting the importance of understanding the number of competitors in the market. The Government Regulations scored 260, also in the high category, indicating that the company recognizes the impact of regulations on operations and production costs. The Association Regulations received a score of 248, which is high, showing the company's awareness of industry standards they must comply with. The Innovation in Production scored 286, categorizing it as high, demonstrating that the company actively focuses on innovation to enhance efficiency and reduce costs. Understanding substitutes is crucial for the company, as substitute products offer alternatives that may come at lower prices or feature different attributes. When consumers switch to substitutes, the demand for primary products can decrease. Companies that are not vigilant may lose their competitive edge. Recognizing substitute products promotes innovation and strategic marketing adjustments, fostering efficiency and improved product quality. Therefore, understanding substitutes

helps the company thrive in market competition. The company is also mindful of the number of competitors, as increased competition tightens market conditions, putting pressure on prices and profit margins. Knowing the number and strength of competitors allows the company to develop more effective strategies. Competition also drives innovation and product quality improvement; neglecting it can lead to loss of customers and market position. Competitor analysis helps the company identify opportunities and threats, making it crucial to maintain competitiveness and business sustainability. The company pays attention to government regulations because these regulations can affect operations and production costs. Non-compliance can result in legal penalties or fines. The government can also regulate prices, taxes, and business licenses, which impact business strategies. Understanding regulations helps the company adapt and reduce legal risks. Policy changes can present opportunities or threats that must be anticipated. By complying with regulations, the company builds a solid reputation, making adherence essential for business continuity and growth. The company is aware of association regulations, as these rules reflect the industry standards it must uphold. Compliance demonstrates professionalism and enhances credibility with business partners and consumers. Associations often set ethical business standards and technical guidelines to maintain healthy competition; following these rules helps the company stay relevant and competitive. Violations can lead to sanctions or exclusion from the industry community. Additionally, associations often provide access to market information and training, making it important to adhere to association regulations for strong business growth and networking. The company must focus on production innovation as it increases efficiency and lowers costs. Innovation allows for the use of new technologies that speed up processes and reduce errors. The resulting products can also have higher and more consistent quality. Production innovation enables the company to respond more quickly to market changes. Moreover, production advantages can serve as a unique selling proposition that distinguishes them from competitors. Investing in innovation reflects a commitment to continuous improvement, making production innovation vital for maintaining competitiveness and increasing profitability.

Management Control Systems

The Management Control Systems variable consists of four dimensions: Budgeting, Performance Measurement, Internal Control Systems, and Risk Management, which will be measured using 12 questions.

Table 3. Responden Variable Management Control System

Item Statement Dimension	Answer Choices	Score Weight	f	%	Actual Score	Category
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P1 Budget Accuracy Rate		5	14	0,19	70	High
		4	31	0,43	124	
		3	24	0,33	72	
		2	3	0,04	6	
		1	0	0,00	0	
	Score		72	100%	272	
P2 Frequency of Changes		5	1	0,01	5	Moderate
		4	28	0,39	112	
		3	19	0,26	57	
		2	20	0,28	40	
		1	4	0,06	4	
	Score		72	100%	218	
P3 Participation in Budget Preparation		5	5	0,07	25	Moderate
		4	24	0,33	96	
		3	22	0,31	66	
		2	16	0,22	32	
		1	5	0,07	5	
	Score		72	100%	224	
P4 Key Performance Indicators (KPIs)		5	21	0,29	105	High
		4	37	0,51	148	
		3	12	0,17	36	
		2	2	0,03	4	
		1	0	0,00	0	
	Score		72	100%	293	
P5 Individual Performance Evaluation		5	19	0,26	95	High
		4	44	0,61	176	
		3	7	0,10	21	
		2	2	0,03	4	
		1	0	0,00	0	
	Score		72	100%	296	
P6 Periodic Performance Reports		5	26	0,36	130	High
		4	28	0,39	112	
		3	13	0,18	39	
		2	3	0,04	6	
		1	2	0,03	2	
	Score		72	100%	289	
P7 Compliance Rate to Internal Control Procedures		5	30	0,42	150	Very High
		4	28	0,39	112	
		3	14	0,19	42	
		2	0	0,00	0	
		1	0	0,00	0	
	Score		72	100%	304	
P8 Frequency of Internal Audits		5	26	0,36	130	High
		4	25	0,35	100	
		3	15	0,21	45	
		2	4	0,06	8	
		1	2	0,03	2	
	Score		72	100%	285	
P9 Number of Identified Fraud Cases		5	16	0,22	145	High
		4	29	0,40	80	
		3	20	0,28	21	
		2	7	0,10	0	
		1	0	0,00	0	
	Score		72	100%	246	
P10		5	16	0,22	80	High

Risk Identification and Assessment		4	36	0,50	144	
		3	18	0,25	54	
		2	2	0,03	4	
		1	0	0,00	0	
	Score		72	100%	282	
P11 Risk Control		5	12	0,22	60	High
		4	40	0,50	160	
		3	18	0,25	54	
		2	2	0,03	4	
		1	0	0,00	0	
	Score		72	100%	278	
P12 Risk Monitoring and Reporting		5	18	0,25	90	High
		4	36	0,50	144	
		3	15	0,21	45	
		2	3	0,04	6	
		1	0	0,00	0	
	Score		72	100%	285	

The results indicate that the Budget Accuracy Rate scored 272, placing it in the high category, while the Frequency of Changes scored 218, categorizing it as moderate. Participation in Budget Preparation also scored 218, which is moderate. The Key Performance Indicators (KPIs) received a score of 293, categorizing it as high, while Individual Performance Evaluation scored 296, also in the high category. Periodic Performance Reports achieved a score of 289, categorizing it as high. The Compliance Rate to Internal Control Procedures scored 304, placing it in the very high category, and the Frequency of Internal Audits received a score of 285, categorizing it as high. The Identified Fraud Cases scored 246, categorizing it as high, while Risk Identification and Assessment scored 282, also in the high category. Risk Control achieved a score of 278, placing it in the high category, and Risk Monitoring and Reporting scored 285, categorizing it as high as well. Based on statistical data processing, the Budget Accuracy Rate measures how accurately predictions align with actual realizations, which is crucial for decision-making. The Frequency of Budget Updates reflects the company's responsiveness to internal and external conditions. Participation in Budget Preparation signifies the extent to which employees are involved, which can enhance accuracy and commitment. These three indicators work together to create a realistic and adaptive budget. A strong budgeting system allows the company to manage resources more effectively and prevents waste while supporting the achievement of goals. Key Performance Indicators (KPIs) measure how well the company meets its main targets. Individual Performance Assessments evaluate each employee's contributions and encourage performance improvement. Periodic Performance Reports provide routine data for managerial evaluation and decision-making. These three indicators complement each other in creating an objective and transparent measurement system, helping to identify issues early

and establish improvements. With this system, the company can enhance accountability and overall performance. The variance between budgeted and actual costs measures the extent of differences between plans and realizations. The Cost Efficiency Rate indicates the company's ability to use resources optimally. Routine Cost Monitoring ensures that expenses remain controlled and do not exceed set limits. These indicators help detect waste and enable quicker corrective actions, maintaining financial stability and enhancing competitiveness. An effective cost control system allows the company to operate more efficiently and productively. The Compliance Rate to Standard Operating Procedures (SOP) reflects the consistency of processes adhering to established standards. The Frequency of Internal Audits indicates efforts to evaluate and oversee internal performance and compliance. The number of identified fraud cases serves as an indicator of the system's effectiveness in detecting and preventing irregularities. These three indicators are vital for creating a safe and transparent work environment. Good internal control reduces operational, legal, and reputational risks, helping the company maintain stakeholder trust and business sustainability. The number of identified risks indicates how proactive the company is in recognizing potential threats. The Frequency of Risk Assessments reflects the company's commitment to monitoring and updating risk analyses regularly. The Controlled Risk Level measures the success of mitigation strategies in reducing the impact and likelihood of risks. These three indicators help the company prepare for uncertainties. Effective risk management protects assets, reputation, and business continuity, allowing the company to make safer and more sustainable decisions.

Verificative Analysis 1

The validity in this research is assessed using HTMT (Heterotrait-Monotrait Ratio), with the expected HTMT value being less than 0.9, and AVE (Average Variance Extracted).

Tabel 4. Validity, Reliability and Model Fit

	Organizational Culture	External Environmental Uncertainty	Management Control System
IOT1 <- KLE		0.956	
IOT2 <- KLE		0.933	
MU1 <- KLE		0.923	
MU2 <- KLE		0.961	
RC1 <- KLE		0.745	
RC2 <- KLE		0.969	
BU 1 <- MCS			0.771
BU2 <- MCS			0.764
BU3 <- MCS			0.704

ICS2 <- MCS				0.717	
ICS3 <- MCS				0.774	
PER1 <- MCS				0.676	
PER2 <- MCS				0.737	
PER3 <- MCS				0.803	
RM1 <- MCS				0.845	
RM2 <- MCS				0.835	
RM3 <- MCS				0.861	
BO1	0.937				
BO2	0.934				
BO3	0.908				
BO4	0.662				
BO5	0.569				
BO6	0.761				
BO7	0.895				
Reliability Test					
	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Ave Var Ext-AVE	
BO	0.913	0.928	0.934	0.674	
KLE	0.961	0.965	0.969	0.842	
MCS	0.932	0.936	0.942	0.599	
Validity Test					
	Heterotrait-monotrait ratio (HTMT)		Average Variance Extracted (AVE)		
KLE <=> BO	0.567		0.674		
MCS <=> BO	0.658		0.599		
MCS <=> KLE	0.547				
Model					
	Saturated model		Estimated model		
SRMR	0.109		0.109		
d_ULS	5.891		5.891		
d_G	5.250		5.250		
Chi-square	1320.537		1320.537		
NFI	0.580		0.580		
R-square					
	R-square		R-square		
MCS	0.437		0.420		
Statistics & P values					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
BO -> MCS	0.484	0.493	0.096	5.035	0.000
KLE -> MCS	0.256	0.255	0.106	2.417	0.016

Based on Table 4 above, the Convergent Validity Test of the Inner Model shows that each item statement for the Information Technology variable has a loading factor of ≥ 0.70 and an AVE value of > 0.50 , indicating that convergent validity is met. Similarly, for the External Environmental Uncertainty variable, each item statement also has a loading factor of ≥ 0.70 and an AVE value of > 0.50 , confirming that convergent validity is satisfied. The model, however, does not demonstrate a good goodness-of-fit, particularly regarding SRMR (0.109) and NFI (0.580). Nevertheless, since this study uses PLS-SEM, the approach focuses more on the significance and strength of path relationships between constructs rather than just fit indices.

Therefore, if the structural model is significant and theoretically relevant, it can still be accepted for further interpretation, although it should be transparently discussed in terms of limitations. The testing of the structural model aims to examine the relationships among latent variables within the research model. The R-Square (R^2) test is used to see how much the independent variables explain the dependent variable, while Path Coefficients test the strength of the relationships among latent variables. The significant path coefficient values are assessed using bootstrapping to obtain the t-statistic and p-value. A t-statistic greater than 1.96 and p-value less than 0.05 indicate that the relationships among variables are significant. If there are mediation hypotheses within the model, a mediation analysis using bootstrapping is conducted to test whether the relationship between the independent and dependent variables is influenced by a mediator. In the context of Partial Least Squares (PLS) Structural Equation Modeling (SEM), the R-square and adjusted R-square values are used to assess how much the independent variables explain the dependent variable in the model. For Management Control System, an R-square of 0.437 shows that 43.7% of the variance in MCS can be explained by the independent variables in the model, while the Adjusted R-square of 0.420 indicates a slight decrease after adjustment but still demonstrates a fairly good explanatory contribution. According to the criteria, R-square values greater than or equal to 0.67 are generally considered good, 0.33 to 0.67 moderate, and less than or equal to 0.33 weak. With MCS at 0.437 categorized as moderate, the research model suggests that the variables effectively explain the variation in both variables, especially concerning Company Performance.

The path analysis results in the SEM PLS model find that Organizational Culture (OC) has a positive and significant impact on the implementation of Management Control Systems (MCS) with a coefficient of 0.484, a t-value of 5.035, and a p-value of 0.000, indicating that the values, norms, and behaviors formed within the organization contribute to the creation of a more effective control system. External Environmental Uncertainty (EEU) also has a positive and significant effect on the

implementation of MCS with a coefficient of 0.256, a t-value of 2.417, and a p-value of 0.016, suggesting that in uncertain situations, organizations tend to strengthen their internal control systems. Organizational culture is a crucial element in forming management systems and processes, including the design and implementation of Management Control Systems (MCS). Culture not only reflects the organization's identity but also serves as a behavioral guide for its members in carrying out work activities. MCS is a set of mechanisms used by management to direct, monitor, and evaluate organizational activities in alignment with strategic objectives; thus, the relationship between organizational culture and MCS is mutually influencing and inseparable. Organizational culture is viewed in the context of MCS design.

The contingency approach in management indicates that there is no single ideal control system design for all organizations. MCS design is significantly affected by contextual factors, one of which is organizational culture. Organizations with open, collaborative, and innovative cultures tend to succeed better with flexible and participative control systems, while those with hierarchical or conservative cultures are better suited to strict and structured control systems. In the theory of Levers of Control, it is stated that control systems consist of four main types: belief systems, boundary systems, diagnostic control systems, and interactive control systems. Organizational culture affects how these four systems are implemented; in organizations that emphasize shared values and missions, belief systems play a significant role in shaping behavior, whereas in organizations focused on results and efficiency, diagnostic control systems become primary control instruments. Different types of culture and their influence on MCS are also significant. It is recognized that organizations with high levels of trust and commitment among members rely more on social control than formal structural control. Research indicates that organizations encouraging learning and innovation tend to use performance measurement systems interactively rather than just diagnostically. This demonstrates that in dynamic cultures, control systems must support two-way communication and ongoing value creation. The alignment of culture and MCS with performance, as well as the compatibility between organizational culture and MCS design, are crucial for improving organizational performance. Good synchronization between MCS and Organizational Culture positively impacts both financial and non-financial performance. Misalignment can lead to resistance, internal conflicts, and decreased motivation and effectiveness within the organization. It is emphasized that management control encompasses not only formal systems like budgets and performance indicators but also informal elements such as trust, ethics, and cultural values. Therefore, control that focuses solely on numbers without considering the cultural context is often ineffective and can even be

counterproductive. Organizational culture is shaped by the national culture in which the organization operates. Certain cultural dimensions influence management practices across different countries. In countries with high uncertainty avoidance, organizations tend to adopt rigid and bureaucratic control systems, whereas in high individualism countries, control systems are more decentralized and results-based. Organizational culture plays a central role in shaping the effectiveness of Management Control Systems (MCS). The design and implementation of MCS that align with the organization's culture not only create efficient control systems but also ones that are socially acceptable to members of the organization. Therefore, in the context of strategic and managerial planning, a deep understanding of organizational culture becomes essential for creating adaptive, participative controls and enhancing sustainable performance.

Management Control Systems (MCS) are vital in achieving the organization's strategic objectives. These systems function as tools for monitoring performance and directing individual and group behavior within the organization in alignment with desired strategies. However, their design and effectiveness are profoundly influenced by the environment in which the organization operates, especially in high-uncertainty conditions. Organizational uncertainty, defined as the lack of necessary information to accurately understand or predict the organization's future, can arise from various external sources such as regulatory changes, economic fluctuations, industry competition, and technological advancements. Internal uncertainties include high product innovation, operational complexity, and lack of interdepartmental coordination. Behavioral uncertainties encompass motivation, organizational culture, and employee expectations. These three dimensions compel organizations to design control systems that manage operational activities while remaining flexible in the face of change. Research indicates that organizations operating in uncertain environments tend to adopt more complex and information-based control systems, as managers facing high uncertainty require extensive information. Environmental contingency also underpins the characteristics of MCS. The effectiveness of MCS highly depends on the alignment between the employed systems and the external context and organizational strategies. In high-uncertainty conditions, overly bureaucratic control systems can hinder flexibility and creativity, ultimately negatively impacting performance. In the context of uncertainty, different control systems are more applicable. The distinction between diagnostic control systems and interactive control systems is important; in high uncertainty conditions, diagnostic systems that focus on measuring performance against predetermined targets become inadequate. Instead, interactive control systems, which emphasize intensive communication among managers and strategic dialogue, are more fitting for unstable environments, allowing organizations

to remain adaptable. In complex and uncertain environments, the role of informal controls, such as organizational values and work culture, becomes increasingly important. Value-based control can strongly align employee behavior with organizational goals, particularly when formal controls are insufficient. It is also relevant for organizations requiring rapid and flexible responses to environmental changes. Practical implications arising from the relationship between uncertainty and MCS suggest that organizations should adopt control systems that are adaptive, flexible, and support open communication. Utilizing information technology to enhance monitoring capabilities and real-time responses is crucial when facing uncertainty. A balance between formal and informal controls is necessary to maintain discipline while allowing for innovation. Furthermore, managers should receive training on using MCS strategically in dynamic environments. Organizational uncertainty significantly impacts how organizations craft and implement management control systems, making interactive, value-based, and adaptive control approaches more relevant compared to rigid, standardized systems. Effective MCS in such environments must provide strategic information, support learning, and facilitate flexibility in decision-making. A profound understanding of the nature of uncertainty and the ability to adapt control systems is key to achieving competitive advantage.

CONCLUSION

Organizational culture serves as a fundamental element that is inseparable from the design and implementation of Management Control Systems (MCS). It not only represents the identity of the organization but also establishes the values, norms, and behaviors that guide daily activities. The effectiveness of MCS relies on the alignment between control systems and the prevailing cultural attributes within the organization. Organizations with open, collaborative, and innovative cultures thrive with interactive and flexible MCS, while hierarchical cultures benefit from formal and structured controls. The relationship between culture and MCS not only enhances control effectiveness but also fosters sustainable value creation through two-way communication, organizational learning, and innovation. Conversely, misalignment can diminish control effectiveness and weaken member motivation. Furthermore, external environmental uncertainty significantly influences the design and effectiveness of MCS. Organizations facing dynamic changes, such as regulatory shifts and technological advancements, require adaptive and flexible control systems. The effectiveness of MCS varies based on contextual external factors and organizational strategies. Highly bureaucratic systems can stifle creativity and responsiveness, while interactive and communicative controls foster

organizational learning and proactive adaptation. Therefore, organizations must prioritize harmonizing organizational culture and MCS, making it essential for creating control systems that are technically efficient and socially accepted. This alignment establishes a solid foundation for achieving adaptable, participative, and sustainable organizational performance in increasingly complex environments. Ultimately, organizations need to design MCS that are adaptive and participative, integrating formal and informal controls with technology to strengthen competitive advantage and sustainability in the long term.

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