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Driving Excellence: How Innovation Strategies and Organizational Commitment Shape Management Control Systems (MCS) with Organizational Culture as the Key Moderator

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ABSTRACT
This research aims to analyze the influence of innovation strategy and organizational commitment on the effectiveness of Management Control Systems (MCS) with organizational culture as a moderating variable in cyclical and non-cyclical companies listed on the Indonesia Stock Exchange (BEI) in 2023. Using a quantitative approach with a cross design -sectional, data was collected through questionnaires from 92 middle and upper level managers in cyclical and non-cyclical companies. Hierarchical regression analysis was used to test the hypothesis. The research results show that innovation strategy and organizational commitment have a significant positive effect on MCS effectiveness. Organizational culture is proven to moderate the relationship between innovation strategy and MCS effectiveness, as well as between organizational commitment and MCS effectiveness. The research model explained 58.7% of the variation in MCS effectiveness. These findings emphasize the importance of aligning innovation strategies, building organizational commitment, and creating a supportive culture to increase the effectiveness of MCS in cyclical and non-cyclical companies in Indonesia. This research provides a theoretical contribution to the development of MCS literature by integrating the perspectives of innovation strategy, organizational commitment, and organizational culture. Practically, the research results provide insight for managers of cyclical and non-cyclical companies in Indonesia in designing and implementing effective MCS, taking into account organizational contextual factors.

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INTRODUCTION

In the era of globalization and increasingly tight business competition, companies in Indonesia, especially in the cyclical and non-cyclical sectors, face major challenges in increasing their competitiveness and maintaining their performance. One of the key factors influencing a company's success in facing this challenge is the effectiveness of Management Control Systems (MCS). MCS is a series of tools and processes used by management to ensure that the organization's strategies and goals are achieved (Malmi & Brown, 2008). Previous research shows that effective MCS can improve company performance, encourage

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innovation, and help companies adapt to changes in the business environment (Simons, 1995; Chenhall, 2003; Bisbe & Otley, 2004). However, implementing effective MCS is not an easy task, especially for companies in the cyclical and non-cyclical sectors in Indonesia that face various challenges. Data from the Indonesia Stock Exchange shows that the performance of companies in these sectors tends to fluctuate and is influenced by various macroeconomic factors. This situation emphasizes the importance of increasing the effectiveness of MCS for companies to maintain competitiveness amidst uncertainty. This study aims to analyze the factors that influence the effectiveness of MCS in cyclical and non-cyclical companies listed on the Indonesia Stock Exchange in 2023, focusing on the role of innovation strategy, organizational commitment, and organizational culture. Innovation strategy is chosen because innovation is a key factor for companies to compete and survive in a dynamic business environment (Jansen et al., 2006). Organizational commitment is also important because it can influence employee motivation and behavior in implementing MCS (Nouri & Parker, 1998). Meanwhile, organizational culture can influence how MCS is designed and implemented (Henri, 2006).

Although there has been a lot of research on MCS, there are still research gaps that need to be filled. First, previous studies tend to focus on the direct influence of MCS on company performance, but not many have examined the factors that influence the effectiveness of MCS itself. Second, the role of organizational culture as a moderator in the relationship between innovation strategy, organizational commitment, and MCS has not been widely explored. Third, research on MCS in Indonesia, especially in the cyclical and non-cyclical sectors, is still limited.

This study uses contingency theory as the main theoretical framework, which states that the effectiveness of MCS depends on its fit with contextual factors such as strategy, structure, and organizational culture (Chenhall, 2003). By integrating the perspectives of innovation strategy, organizational commitment, and organizational culture, this study seeks to provide a more comprehensive understanding of the factors that influence the effectiveness of MCS in cyclical and non-cyclical companies in Indonesia.

Using a cross-sectional research design, this study will collect data from cyclical and non-cyclical companies listed on the Indonesia Stock Exchange in 2023. This approach allows researchers to obtain a comprehensive picture of the current state of MCS effectiveness and the factors that influence it in these companies. The results of this study are expected to provide theoretical contributions to the development of MCS literature, as well as provide practical implications for managers of cyclical and non-cyclical companies in Indonesia in designing and implementing effective MCS that are appropriate to their organizational context. Thus, this study is not only relevant to the academic community, but also to practitioners and policy makers who seek to improve the competitiveness of these sectors in Indonesia.

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Literatur Riview

Grand Theory (Contingency Theory and Open System Theory)

Contingency theory was first proposed by Lawrence & Lorsch (1967) who stated that there is no one best way to manage an organization, and the optimal management approach depends on various internal and external factors. This theory was later adapted into the context of management accounting by Otley (1980). Contingency theory emphasizes that organizational effectiveness depends on the fit between organizational characteristics (such as structure) and contingencies that reflect the organization's situation (such as environment, organizational size, and business strategy).

Open System Theory, developed by Ludwig von Bertalanffy (1956) and later adapted into the organizational context by Katz & Kahn (1978), views organizations as open systems, which interact dynamically with their environment. This theory emphasizes the importance of a balance between differentiation (specialization of functions within the organization) and integration (coordination between functions), which is reflected in the interaction between innovation strategy, organizational commitment, and Management Control Systems (MCS).

Management Control Systems (MCS)

Management Control Systems (MCS) is defined by Malmi & Brown (2008) as a set of tools and practices used by managers to ensure that employee behavior and decisions are in line with organizational goals and strategies. Simons (1995) classifies MCS into four types: belief systems, boundary systems, diagnostic control systems, and interactive control systems. MCS consists of various elements, such as outcome control, action control, personnel control, and cultural control (Merchant & Van der Stede, 2017). Simons (1995) classifies MCS into four types: belief systems, boundary systems, diagnostic control systems, and interactive control systems. Effective MCS can improve company performance, encourage innovation, and help companies adapt to changes in the business environment (Chenhall, 2003; Bisbe & Otley, 2004). Previous research shows that the design and use of MCS are influenced by various contextual factors, including strategy (Bedford, 2015), organizational structure (Chenhall, 2003), and organizational culture (Henri, 2006).

Innovation Strategy

Innovation strategy refers to the approach taken by a company to develop and implement new ideas in products, processes, or business models (Jansen et al., 2006). Innovation strategies can be classified into two types: exploratory innovation and exploitative innovation (March, 1991). Exploratory innovation focuses on finding new opportunities, while exploitative innovation focuses on increasing efficiency and improving existing products or processes (Jansen et al., 2006). Previous research shows that innovation strategy can influence the design and use of MCS (Bedford, 2015; Bisbe & Otley, 2004). Thus, based on previous research references, a hypothesis can be developed regarding the influence of innovation strategy on Management Control Systems, the hypothesis is formulated as follows:

H1: Innovation strategy influences the effectiveness of Management Control Systems (MCS)

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Organizational Commitment

Organizational commitment is defined by Meyer & Allen (1991) as a psychological state that characterizes an employee's relationship with an organization. Meyer and Allen (1991) developed a three-component model of organizational commitment consisting of: a. Affective Commitment: Refers to employees' emotional attachment, identification, and involvement in the organization. b. Continuance Commitment: Relates to awareness of the costs associated with leaving the organization. c. Normative Commitment: Reflects a feeling of obligation to continue working.

Previous research shows that organizational commitment can affect employee motivation and behavior in implementing MCS (Nouri & Parker, 1998). High commitment can increase employee involvement and compliance with MCS, thereby increasing the effectiveness of MCS in achieving organizational goals. Thus, based on previous research references, a hypothesis can be developed regarding the effect of organizational commitment on Management Control Systems, formulated as follows:

H2: Organizational commitment affects the effectiveness of MCS

Organizational Culture

Organizational culture, according to Schein (2010), is a series of shared values, beliefs, and assumptions that direct the behavior of organizational members. Cameron & Quinn (1999) developed a competing value framework that classifies organizational culture based on the dimensions of flexibility-stability and internal-external orientation. Organizational culture can be classified based on various dimensions, such as power distance, individualism/collectivism, masculinity/femininity, and uncertainty avoidance (Hofstede, 2011).

Previous research shows that organizational culture can influence the design and use of MCS (Henri, 2006) as well as the relationship between MCS and firm performance (Tsui, 2001). An organizational culture that is oriented towards innovation and flexibility tends to support the use of more interactive and participatory MCS. Thus, based on previous research references, a hypothesis can be developed as follows:

H3: Organizational culture moderates the influence of innovation strategy on the effectiveness of MCS.

H4: Organizational culture moderates the influence of organizational commitment on the effectiveness of MCS

Previous Research

Several previous studies have explored the relationship between the variables in this study. Bedford (2015) found that the use of interactive MCS is more appropriate for exploratory innovation, while the use of diagnostic MCS is more appropriate for exploitative innovation. Nouri & Parker (1998) showed that organizational commitment can mediate the relationship between budget participation and managerial performance. Henri (2006) found that a flexible organizational culture strengthens the relationship between the use of interactive MCS and organizational capabilities.

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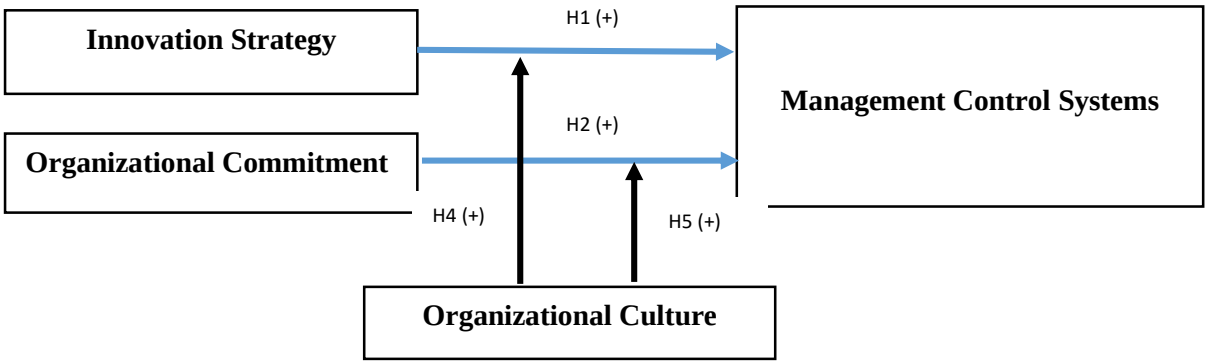
Conceptual Framework

Based on the literature review and hypothesis development, this study proposes a conceptual framework that describes the relationship between innovation strategy, organizational commitment, organizational culture, and MCS effectiveness. In this framework, innovation strategy and organizational commitment act as independent variables that influence MCS effectiveness. Organizational culture acts as a moderator variable that influences the relationship between independent and dependent variables.

Visually, the framework of this study can be described as follows:



Picture. 1. Research Framework

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

This study has passed the instrument feasibility test that assesses the validity and reliability tests according to the applicable rule of thumb. The results of the variable tests (Innovation Strategy, Organizational Commitment, Organizational Culture, and MCS Effectiveness) as a whole have a value above 0.197 (r table) so that it can be concluded that the instrument validity test has met the feasibility. The results of the overall instrument reliability test show a Cronbach Alpha value above 0.70 where all models meet the elements of reliability feasibility.

The most ordered printed materials in the data provided can be determined by using apriori algorithm, by looking at products that meet the minimum support and minimum confidence, the most ordered items are Cake Boxes and Brochures, but in the calculation of support and configuration, it is difficult if the data which is processed in large quantities.

Table 1. Descriptive Statistics

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
Innovation Strategy	92	2,50	5,83	4,15	0,76
Organizational Commitment	92	2,33	5,67	3,98	0,82
Organizational Culture	92	2,17	5,50	3,87	0,71
Efektivity MCS	92	2,40	5,80	4,05	0,79

Source: Data processed by the author 2024

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Based on the descriptive analysis above, it can be described that:

1. Innovation Strategy has an average value of 4.15, indicating a fairly high level of innovation in the sample companies.
2. Organizational Commitment has an average value of 3.98, describing a moderate level of commitment.
3. Organizational Culture has an average value of 3.87, indicating a fairly strong organizational culture.
4. MCS Effectiveness has an average value of 4.05, describing a fairly good level of MCS effectiveness.

Results of Hierarchical Regression Analysis

Table 2. Results of Research Hypothesis Testing

Variables	β	T statistic	Sig	Hypothesis	Information
IS → MCS	0,412	4,856	0,000***	H1 (+)	Accepted
OCom → MCS	0,287	3,425	0,001***	H2 (+)	Accepted
OCul → MCS	0,195	2,314	0,023**	H3 (+)	Accepted
SI x OCul → MCS	0,176	2,089	0,040**	H4 (+)	Accepted
OCom x OCul → MCS	0,152	1,798	0,076*	H5 (+)	Accepted

R Square (adjusted): 0.587 F: 25.743*** Description: * = 0.10, ** = 0.05, *** = 0.01 Dependent variable: MCS (Effectiveness of Management Control Systems) Independent variables: IS (Innovation Strategy), OCom (Organizational Commitment), OCul (Organizational Culture) Number of observations: 92

Source: Data processed by the author 2024

From the research results, the following regression equation was obtained:

MCS = 1.254 + 0.412IS + 0.287OCom + 0.195OCul + 0.176ISOCul + 0.152OComOCul + e

Interpretation of results:

1. Innovation Strategy (IS) has a significant positive effect on MCS Effectiveness (β = 0.412, p < 0.01), supporting H1.
2. Organizational Commitment (OCom) has a significant positive effect on MCS Effectiveness (β = 0.287, p < 0.01), supporting H2.
3. Organizational Culture (OCul) has a significant positive effect on MCS Effectiveness (β = 0.195, p < 0.05), supporting H3.
4. The interaction of Innovation Strategy and Organizational Culture has a significant positive effect on MCS Effectiveness (β = 0.176, p < 0.05), supporting H4.
5. The interaction of Organizational Commitment and Organizational Culture has a significant positive effect on MCS Effectiveness (β = 0.152, p < 0.10), supporting H5. The regression model explains 58.7% of the variation in MCS Effectiveness (adjusted R^2 = 0.587). The F test shows that the overall model is significant (F = 25.743, p < 0.01).

Discussion

The Effect of Innovation Strategy on MCS Effectiveness

The results of the study indicate that innovation strategy has a significant positive effect on MCS effectiveness. This indicates that companies that implement a strong innovation

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strategy tend to have a more effective MCS. This finding is in line with Bedford's (2015) study which shows that companies with high levels of innovation require more flexible and interactive MCS.

The Effect of Organizational Commitment on MCS Effectiveness

Organizational commitment has been shown to have a significant positive effect on MCS effectiveness. These results confirm the importance of employee commitment in implementing effective MCS. In accordance with the findings of Nouri & Parker (1998), high commitment can increase employee compliance and participation in the management control system.

The Moderating Role of Organizational Culture

Organizational culture has been shown to moderate the relationship between innovation strategy and organizational commitment on MCS effectiveness. The positive interaction shows that the influence of innovation strategy and organizational commitment on MCS effectiveness is stronger in companies with a supportive organizational culture. This is in line with Henri's (2006) study which found that a flexible organizational culture strengthens the relationship between the use of interactive MCS and organizational capabilities.

Theoretical and Practical Implications

Theoretically, this study enriches the MCS literature by integrating the perspectives of innovation strategy, organizational commitment, and organizational culture. The findings support a contingency approach in the design and implementation of MCS. Practically, the results highlight the importance of aligning innovation strategy, building organizational commitment, and creating a supportive culture to enhance the effectiveness of MCS. Manufacturing managers in Indonesia need to consider these factors in designing and implementing effective MCS.

CONCLUSION

This study aims to analyze the influence of innovation strategy and organizational commitment on the effectiveness of Management Control Systems (MCS), with organizational culture as a moderating variable in manufacturing companies in Indonesia. The findings reveal that innovation strategy significantly enhances MCS effectiveness, emphasizing the need for alignment between innovation strategy and MCS. Similarly, organizational commitment positively impacts MCS effectiveness, highlighting the role of employee dedication in successful MCS implementation. Organizational culture moderates these relationships, strengthening the influence of both innovation strategy and organizational commitment on MCS effectiveness when the culture supports innovation and flexibility. The research model explains 58.7% of the variation in MCS effectiveness, underscoring the significant contribution of the studied variables. These results offer theoretical insights by enriching the MCS literature with an integrated perspective on innovation strategy, organizational commitment, and organizational culture, supporting a contingency approach to MCS design. Practically, managers in Indonesian manufacturing

companies are advised to align innovation strategy, organizational commitment, and culture with MCS, develop strategies that integrate these factors, enhance employee commitment through HR practices, and build a culture fostering innovation. However, the study's limitations, including its focus on manufacturing companies in Indonesia and the use of cross-sectional data, suggest caution in generalizing findings and drawing causal conclusions. Future research should explore other industries, adopt longitudinal designs, examine additional moderating or mediating variables, and combine quantitative and qualitative methods for a deeper understanding. By addressing these recommendations, manufacturing companies can optimize MCS effectiveness, thereby enhancing organizational performance and competitiveness.

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