Journal of Applied Business, Taxation and Economics Research (JABTER)
Vol. 4, No. 1, October 2024 (Page: 144-154) P-ISSN 2828-4976
DOI: 10.54408/jabter.v4i1.394 E-ISSN 2808-263X

The Role of Management Control Systems in Enhancing Business Strategy Effectiveness and Innovation: Implications for Company Performance

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Keywords **:** *Management Control Systems, Innovation, Business Strategy Effectiveness, Company Performance, Financial Services*

Abstract: This study investigates the role of Management Control Systems (MCS) in supporting business strategy effectiveness and innovation, and how these factors influence company performance within the financial services sector. Using a quantitative approach, data were collected through structured questionnaires distributed to 150 financial service companies in Indonesia. The analysis, performed using Partial Least Squares Structural Equation Modeling (PLS-SEM), indicates that MCS positively influences both business strategy effectiveness and innovation. Additionally, the findings reveal that both business strategy effectiveness and innovation significantly contribute to improved company performance. These results underscore the importance of MCS as a strategic tool for fostering innovation and aligning business strategies, ensuring that organizations can navigate dynamic market environments effectively. The study offers practical insights for managers in financial services, emphasizing the need to leverage MCS not only for operational oversight but also as a facilitator of strategic alignment and innovation. Future research may explore these dynamics across different sectors and regions to further validate these findings.

Introduction

In recent decades, global business dynamics have undergone significant changes, characterized by increasingly fierce competition and increasing demands on operational efficiency and innovation. Companies are not only required to manage resources optimally but must also be able to anticipate market changes quickly and respond to them effectively. In this context, the role of Management Control Systems (MCS) is very important. MCS is a system that allows management to direct, monitor, and control operational activities so that they are in line with the company's strategic goals. MCS plays a crucial role in ensuring that all operational activities carried out by the company are within the framework of a predetermined strategy, by facilitating the collection, analysis, and distribution of relevant information for better decision-making (Simons, 1995; Otley, 1980; Davila et al., 2009).

Historically, MCS functions as a control tool that ensures that operational activities are running according to the plan that has been prepared, identifies deviations from targets, and allows management to take corrective action quickly (Henri, 2006; Merchant & Van der Stede, 2012). However, with the changing business environment becoming more dynamic, MCS must evolve into more than just an operational efficiency control tool. Companies are now required to be more flexible and innovative in facing new challenges, and this is where the role of MCS needs to be adjusted to support innovation while maintaining operational stability. In previous studies, diagnostic controls in MCS have been recognized as effective in ensuring efficiency, while interactive controls help companies to explore new opportunities and drive innovation (Simons, 1995; Bisbe & Otley, 2004). Thus, an effective MCS must be able to function as a mechanism to manage uncertainty while supporting innovative processes.

Innovation itself is the ability of a company to create value through the development of new products, services, or processes. Continuous innovation allows companies to maintain their competitiveness in an ever-changing market. According to Damanpour (1991), innovation includes not only the development of new technologies but also the application of new methods in organizational management that can increase efficiency and create competitive advantages. Furthermore, Bisbe and Otley (2004) show that innovation in companies can be promoted through control structures that support collaboration and experimentation, which emphasizes the importance of active involvement of all parts of the organization in developing new ideas. In this case, MCS plays a dual role; not only controls efficiency but also creates an environment conducive to innovation by providing a structure that allows for risk management and directed experimentation.

In addition, the effectiveness of business strategies is an important aspect that affects the company's performance. An effective business strategy is able to direct the company in achieving long-term goals by optimizing internal strengths and taking advantage of external opportunities. The Balanced Scorecard approach developed by Kaplan and Norton (1996) is one way to assess the effectiveness of business strategies from various perspectives such as finance, customers, internal processes, and learning and growth. In its implementation, MCS acts as a tool to ensure that the designed strategy can be implemented effectively, by

P-ISSN 2828-4976
E-ISSN 2808-263X

providing continuous feedback for strategy adjustment according to the prevailing market dynamics (Simons, 1995; Henri, 2006). A study by Davila et al. (2009) emphasizes that strategies supported by MCS will be more flexible and responsive to change, considering that MCS provides relevant and accurate data to help make more effective strategic decisions.

The linkage between MCS, innovation, and the effectiveness of business strategies has far-reaching implications for company performance. The company's performance is not only seen from a financial perspective such as profitability, increased revenue, and market growth, but also from non-financial indicators such as customer satisfaction, operational efficiency, and innovation success (Venkatraman & Ramanujam, 1986). Previous research has shown that companies that are able to combine effective business strategies with continuous innovation tend to have superior performance compared to their competitors. For example, research by Simons (1995) and Kaplan & Norton (1996) shows that a well-used MCS not only helps in monitoring operational performance but also in integrating the innovation process into business strategies, ultimately improving the overall competitiveness of the company. Therefore, MCS can be considered a key pillar that supports the integration between innovation and business strategy.

In the financial services sector, the role of MCS is becoming increasingly critical given the nature of this industry which relies heavily on data management and technology-based services. Companies in this sector must be able to respond quickly to regulatory changes, customer preferences, and technological developments to stay competitive. However, the main challenge faced by financial services companies is integrating innovation into sustainable business strategies. MCS in this context needs to be designed not only to control efficiency but also to facilitate safe and scalable experimentation, as well as to support data-driven strategic decision-making (Henri, 2006; Davila et al., 2009). Research in this sector is still relatively limited compared to the manufacturing sector, although the importance of MCS as a tool to increase competitiveness and support innovation is increasingly recognized.

Therefore, this study aims to investigate how MCS can support innovation and business strategy, as well as how these three variables contribute to improving company performance, particularly in the financial services sector. By understanding the interconnection between MCS, innovation, and strategy, companies can design a more adaptive and strategic control system, which not only serves as a control tool but also as a driver of long-term business success. It is hoped that this research can make a practical contribution for managers in the financial services industry to design and implement MCS that is more responsive and supports innovation, while ensuring that the implemented business strategy can run effectively in the midst of increasingly fierce competition.

Overall, the contribution of this research lies in providing practical guidance for managers in leveraging MCS to support business strategy and innovation, as well as providing new insights into the existing literature on the important role of MCS in managing change dynamics in the service sector. In an increasingly complex and fast-changing business environment, the ability to strategically leverage MCS can be a decisive factor in maintaining a competitive advantage.

Theoretical Background

Management Control Systems (MCS) and Business Strategy Effectiveness

Management control systems (MCS) are a set of procedures and tools that organizations use to monitor and direct performance, ensuring that strategic objectives are achieved effectively and efficiently. MCS provides a framework for managers to integrate relevant information with business strategy so that decisions taken are in line with the company's vision and mission (Simons, 1995). According to Otley (1980), MCS assists organizations in controlling operational activities and facilitating the implementation of strategies that are adaptive to market changes.

Previous research has shown that MCS plays an important role in supporting business strategy by improving the quality of decision-making and operational efficiency. Davila et al. (2009) and Henri (2006) argue that MCS enables companies to monitor performance in real-time, identify deviations from targets, and implement corrective actions quickly. In this context, MCS serves not only as a control tool but also as a driver for better strategic adaptation, especially in a dynamic industry such as financial services.

Based on this study, the following hypothesis is proposed:

> **H1: MCS has a positive influence on the effectiveness of business strategies in financial services companies.**

MCS and Innovation

In addition to supporting business strategies, MCS also plays a significant role in driving innovation. Henri (2006) explained that the use of interactive MCS creates an environment where managers and employees can collaborate to identify new opportunities and creative solutions. This is supported by Bisbe and Otley (2004), who found that interactive controls in MCS allow organizations to explore new ideas without having to sacrifice operational stability. In the digital era, innovation is a key element to maintain competitiveness. Therefore, financial services companies that integrate MCS with innovation processes tend to have a better ability to adapt and compete in a rapidly changing market (Belk et al., 2023). Based on the existing literature, the following hypothesis is proposed:

> **H2: MCS has a positive influence on innovation in financial services companies.**

Effectiveness of Business Strategy and Company Performance

Effective business strategy plays an important role in determining the overall performance of the company. A well-designed strategy allows companies to respond quickly to market changes, optimize resources, and create a competitive advantage. Kaplan and Norton (1996), through the concept of the Balanced Scorecard, underline that an effective business strategy must be measured based on several perspectives, including financial performance, customer satisfaction, internal processes, and learning and growth. Thus, a successful strategy not only creates increased revenue but also improves internal processes and increases competitiveness in the market.

P-ISSN 2828-4976
E-ISSN 2808-263X

Empirical studies support a positive relationship between the effectiveness of business strategies and firm performance. Simons (1995) stated that a well-managed strategy allows organizations to achieve higher goals by utilizing focused managerial control. In a more recent study, Henri (2006) also emphasized that effective business strategies facilitate better decision-making, allowing companies to take advantage of market opportunities and overcome challenges more efficiently. This is especially important in the financial services industry, where rapid technological and regulatory changes require an agile and adaptive strategic response.

In addition, Davila et al. (2009) show that the effectiveness of business strategies is the main determinant of a company's performance because it directs the company's resources to focus on activities that generate value. A good strategy ensures that every part of the organization works in harmony towards the same goal, reducing inefficiencies and increasing productivity. In this context, MCS plays a key role in ensuring that strategies are implemented correctly and measured appropriately, so that it can provide the feedback needed for continuous improvement.

Based on previous theories and research, the proposed hypothesis is as follows:

> **H3: The effectiveness of business strategies has a positive influence on the performance of companies in the financial services industry.**

Innovation and Company Performance

Innovation is one of the key factors that determine a company's competitiveness and performance in the long term. In the management literature, innovation is defined as the process of introducing new products, services, or processes that provide added value to the company and customers (Schumpeter, 1934). Companies that are able to innovate effectively can often create a sustainable competitive advantage because they can respond to rapidly changing market needs and capitalize on emerging opportunities.

Previous research has shown a positive relationship between innovation and company performance. According to Damanpour (1991), innovation plays an important role in improving operational efficiency, expanding market share, and improving financial performance. In this context, product innovation can help companies introduce new products that meet unmet customer needs, while process innovation can improve production efficiency and reduce operational costs. Research by Roberts and Amit (2003) also supports this view by stating that companies that actively innovate have a greater likelihood of achieving higher performance compared to companies that rely solely on traditional business practices.

A study by Hurley and Hult (1998) states that the culture of innovation in organizations contributes to the adaptability of companies to market changes. In a highly competitive industry like financial services, the ability to continuously innovate in products, services, or technology is essential to maintaining competitiveness. This is in line with the view expressed by Tushman and O'Reilly (1996), where companies that succeed in innovating can not only

survive in dynamic market conditions but can also reorganize their resources to drive long-term growth.

Furthermore, in the context of digital transformation and Industry 4.0, innovation is increasingly playing a vital role in determining company performance. Companies that successfully integrate advanced technologies such as artificial intelligence, big data, and the Internet of Things into their innovative processes tend to have superior performance because they can offer more relevant and efficient products and services (Belk et al., 2023). Based on these findings, the following hypothesis is proposed:

H4: Innovation has a positive influence on the performance of companies in the financial services industry.

Research Method

This study uses a quantitative approach with an explanatory design to examine the relationship between Management Control System (MCS) variables, Innovation, Business Strategy Effectiveness, and Company Performance. This approach was chosen because it allows for empirical testing of hypotheses using measurable data that can be analyzed statistically. This explanatory design aims to explain the interactions between these variables and measure the direct or indirect influence between them.

The research population is financial services companies in Indonesia, including banks, insurance companies, and other financial institutions that have adopted Industry 4.0 technologies, such as artificial intelligence (AI), big data, and automation. Companies in this sector were chosen because they are at the forefront of digital transformation and have a high need to integrate MCS with innovation and business strategy. The purposive sampling technique is used to select a sample based on certain criteria, namely companies that have been using Industry 4.0 technology for at least two years, have a structured management control system, and involve managers or executives who understand the implementation of MCS and innovation in their company. Thus, the study targets 200 companies to obtain data that is representative and allows for generalization of results.

Data collection was carried out using primary data collected through a structured questionnaire. The questionnaire was distributed online to managers and executives at financial services firms, with each item using a 7-point Likert scale (from 1 = strongly disagree to 7 = strongly agree). The questionnaire is designed to cover several key sections, namely MCS, Innovation, Business Strategy Effectiveness, and Company Performance. Variable measurements of MCS include diagnostic and interactive controls, adapted from the studies of Simons (1995) and Henri (2006). The Innovation Variable is measured based on the frequency and intensity of new product development and the adoption of new technologies, according to the instrument adapted from Bisbe and Otley (2004). For Business Strategy Effectiveness, the measurement is adapted from the Balanced Scorecard approach by Kaplan and Norton (1996), which includes financial, customer, internal processes, and learning and growth perspectives. Meanwhile, the Company's Performance is measured using financial

P-ISSN 2828-4976
E-ISSN 2808-263X

performance indicators such as revenue and profit growth, as well as non-financial indicators such as operational efficiency and customer satisfaction.

The collected data was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0 software. The PLS-SEM technique was chosen because it can handle complex models and is suitable for research with not too large sample sizes or abnormal data distribution.

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Results And Discussion

This section presents the results of data analysis that has been carried out and the interpretation of the findings obtained through hypothesis testing. This analysis helps to understand how Management Control Systems (MCS), innovation, and the effectiveness of business strategies affect company performance, as well as the moderating role of Industry 4.0 technologies.

Descriptive Statistics

Descriptive analysis was carried out to provide an overview of the research sample. Of the 200 invited financial services companies, 150 companies returned the questionnaire with valid data, providing a response rate of 75%. The sample consisted of companies of various sizes, with 60% of medium-sized companies, and another 40% of large companies. Most respondents (80%) reported the use of Industry 4.0 technologies such as AI and big data in operational processes and decision-making.

The average values for the variables MCS, Innovation, Business Strategy Effectiveness, and Company Performance are above the midpoint of the Likert scale, which indicates that most companies have implemented good and innovation-oriented control systems. A low standard deviation indicates consistency in responses.

Evaluation of Measurement Model (Outer Model)

The validity and reliability of the measurement model were tested using Average Variance Extract (AVE), Composite Reliability (CR), and Cronbach's Alpha. All variables showed AVE values above 0.50, as well as CR and Cronbach's Alpha values above 0.70, indicating that the model was valid and reliable.

Table 1. Validity and Reliability of Constructs

Construction	AVE	Composite Reliability (CR)	Cronbach's Alpha
MCS	0,72	0,89	0,82
Innovation	0,68	0,87	0,81
Effectiveness of Business Strategy	0,70	0,90	0,85
Company Performance	0,69	0,88	0,83

Source: Output SmartPLS(2024)

Convergent validity values are obtained through AVE values, which are all above the 0.50 threshold. The CR value shows high reliability, confirming the good internal consistency of the items used to measure each variable.

Evaluation of Structural Model (Inner Model)

The structural model was evaluated through path coefficients and statistical significance resulting from the bootstrapping method with 5,000 samples. This model was also tested to find out the moderation effect of Industry 4.0 technology.

Table 2. Path Coefficients Results and Significance

Hypothesis	Path Coefficient (β)	t-value	p-value	Result
H1: MCS → Business Strategy Effectiveness	0,45	4,25	0,000	Accepted
H2: MCS → Innovation	0,38	3,10	0,002	Accepted
H3: Strategy Effectiveness → Performance	0,49	4,80	0,000	Accepted
H4: Innovation → Performance	0,42	3,90	0,001	Accepted

Source: Output SmartPLS(2024)

Based on table 2 we can conclude that H1: MCS has a positive influence on the effectiveness of business strategies. The results showed that MCS had a significant positive influence on the effectiveness of business strategies ($\beta = 0.45$, $p < 0.01$). This shows that a good MCS implementation can improve a company's ability to execute an effective strategy. These results are consistent with the research of Simons (1995) and Otley (1980) who stated that MCS functions as an important tool in supporting strategic decision-making.

H2: MCS has a positive influence on innovation. The analysis showed that MCS had a positive and significant influence on innovation ($\beta = 0.38$, $p < 0.05$). This supports the literature that states that interactive controls in MCS can create an environment that supports innovation (Bisbe & Otley, 2004).

H3: The effectiveness of business strategies has a positive influence on the company's performance. The results showed that the effectiveness of business strategies had a significant positive effect on the company's performance ($\beta = 0.49$, $p < 0.01$). This indicates that companies with effective strategies are more likely to achieve better performance, in line with the findings of Kaplan and Norton (1996) on the importance of a measurable strategy.

H4: Innovation has a positive influence on the company's performance. The analysis found that innovation had a significant positive impact on company performance ($\beta = 0.42$, $p < 0.01$). This shows that companies that are actively innovating are better able to improve their financial and operational performance, in line with research by Damanpour (1991) and Hurley & Hult (1998).

Interpretation of Key FindingsThe results of this study support all the hypotheses proposed, demonstrating the importance of MCS in supporting effective business strategies and innovation in organizations. These findings are consistent with previous studies that highlight the role of MCS as a driver for strategic adaptation and innovation in a dynamic business environment. In addition, the positive influence of the effectiveness of business

P-ISSN 2828-4976
E-ISSN 2808-263X

strategy and innovation on company performance emphasizes the importance of a structured approach in strategy and innovation management.

Conclusion

This study concludes that Management Control Systems (MCS) play a crucial role in supporting business strategy effectiveness and innovation, which significantly contribute to improved company performance. MCS not only function as operational control tools but also act as strategic drivers that help companies navigate market dynamics and integrate innovative processes into effective business strategies. These findings align with previous literature, underscoring that strategic management through MCS can enhance competitiveness and business sustainability.

This study has several limitations. First, the sample was limited to financial service companies in Indonesia, which may restrict the generalizability of the findings to other sectors or geographic contexts. Second, the quantitative approach used may not fully capture the qualitative nuances of how MCS support innovation and strategy implementation.

Future research should consider expanding the scope to include different industries and geographic locations to validate these findings. In-depth qualitative studies could also provide better insights into how MCS are applied in the context of innovation and strategic management. Additionally, exploring other variables, such as organizational culture or leadership, that might influence the effectiveness of MCS in driving innovation and strategy could be a valuable direction for future studies.

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