THE EFFECT OF BUSINESS STRATEGY ON COMPANY PERFORMANCE WITH A MANAGEMENT CONTROL SYSTEM AS A MODERATION VARIABLE

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Abstract

This study examines the suitability of business strategies based on the Miles & Snow typology and the type of Management Control System (MCS) on company performance, with Return on Assets (ROA) as the main indicator, using a sample of 82 non-financial companies listed on the Indonesia Stock Exchange (IDX) during the period 2014 to 2023. This study uses a quantitative approach with longitudinal data, applying cluster analysis, ANOVA, and Games-Howell post hoc test to analyze the suitability between business strategies (defenders, prospectors, analyzers) and MCS types (clan, adhocracy, market, hierarchy). The findings of the study show that the alignment between the business strategy and the type of MCS has a significant effect on the financial performance of the company. The defender strategy gains higher ROA when supported by market-oriented MCS, while the prospector strategy performs best with a clan or adhocracy-type MCS that emphasizes flexibility and innovation. The analyzer strategy has proven to consistently produce stable performance on all types of MCS, confirming its adaptive character. This study highlights the importance of regular evaluation of the suitability of the MCS-strategy and the role of Top Management Team (TMT) characteristics in supporting effective implementation. The results of this study provide theoretical reinforcement for contingency theory and strategic fit, as well as practical guidance for managers to design a Management Control System (MCS) that improves the company's competitiveness and resilience in a dynamic business environment.

Keywords: Business Strategy, Mileage & Snow Typology, Management Control System (MCS), Top Management Team (TMT), Company Performance

INTRODUCTION

In the era of dynamic globalization, companies face complex challenges to stay competitive, so business strategies are essential to create value, maintain market share, and improve performance (Abdelwahed et al., 2023). Since the 1970s, various models of strategy have been developed, such as exploration-exploitation (March, 1991), typology Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman (1978), generic strategy Porter (1980), and the framework of Treacy & Wiersema (1995). The Miles & Snow model divides strategies into defenders, prospectors, analyzers, and reactors. Defenders focus on efficiency (Sollosy et al., 2019), prospectors on innovation despite the risks (Park et al., 2019), while reactive reactors have no clear direction (Sollosy et al., 2019).

Flexibility of strategy improves performance (Rudiawarni et al., 2022), and a Defenders–Prospectors hybrid strategy strengthens competitiveness (Tao et al., 2023), especially after the pandemic, which has harmed many IDX issuers (Abdelwahed et al., 2023; Rehman et al., 2021). Although the number of issuers increased from 477 (2014) to 841 (2023), the ROA fluctuated, from 2.70% (2016) to 1.38% (2023) due to external pressures (Indonesia Stock Exchange, 2023). Proactive companies with an innovation record higher ROA than those that focus only on efficiency (Rudiawarni et al., 2022).

The pandemic drives renewal Management Control System (MCS) with cost efficiency, risk management, and information technology, which improves resilience (Truant et al., 2025). Hybrid strategies combine innovation, efficiency, and adaptation in uncertain conditions (Alnoor et al., 2022; Tao et al., 2023). Strengthening MCS strengthens the strategy–performance relationship (Jukka, 2023; Jukka & Pellinen, 2020), and strategic alignment, i.e., performance measurement adds value (Kathuria & Lucianetti, 2024).

Usage Management Control System (MCS) Effective efficiency is crucial for the sustainability and competitiveness of companies, especially in competitive and dynamic industries (DeSarbo et al., 2005; Jukka & Pellinen, 2020). The COVID-19 pandemic prompted MCS updates with a focus on cost efficiency, liquidity, risk management, and digitalization for performance monitoring in real-time (World Bank, 2021).

In Indonesia, MCS digitization has been proven to speed up data processing, increase transparency, and accelerate post-pandemic performance recovery, as seen from the improvement in the ROA of issuers investing in modern MCS (Rudiawarni et al., 2022). Compatibility between Miles & Snow's business strategy and MCS type (clan, adhocracy, market, hierarchy) determines the effectiveness of performance. Clan/adhocracy emphasizes flexibility and innovation, while market/hierarchy focuses on efficiency and stability (Jukka & Pellinen, 2020). Factors such as the Top Management Team (TMT), company size, and industry type also affect the design and implementation of MCS.

A study on IDX multi-industry companies (2014–2023) shows that companies that adapt MCS to strategies through digitalization and adaptive governance are more resilient in the face of crises (Rudiawarni et al., 2022) This study tested the hypothesis that the defender strategy is more optimal with the MCS market/hierarchy, while the analyzer can be compatible with all types of MCS (Jukka, 2023; Tao et al., 2023), with 10 years of data analysis covering the pre, during, and post-pandemic periods.

REVIEW OF LITERATURE

External Perspective of Strategy Management

The external perspective emphasizes that strategy and performance are determined by suitability to the external environment, where the organization must be adaptive in dynamic and structured conditions, and stable conditions (Barney, 1985).

Internal Perspective of Strategy Management

An internal perspective assesses the performance of defined resources and unique capabilities (VRINs) and the role of top management (UET) in shaping the Miles & Snow strategy, so the MCS needs to be aligned with the resources, strategy orientation, and characteristics of the TMT.

Resource-Based Theory

RBT emphasizes tangible and intangible resources as a source of sustainable excellence through the VRIN criteria, underpinning the relationship between Miles & Snow's strategy, MCS, and performance, with empirical evidence that the alignment of MCS i.e., performance improvement strategies and analyzer strategies, supports competitive flexibility.

Contingency Theory

Contingency Theory emphasizes that the effectiveness of management depends on the suitability of strategy, structure, leadership, and MCS to the context of the organization, where the type of MCS must be aligned with the strategy for optimal performance.

Upper Echelons Theory

The Upper Echelons Theory (UET) asserts that the characteristics of top executives shape the vision, decisions, and performance of the organization, with influences mediated by perception and interpretation, as well as influenced by context. Alignment between TMT characteristics, business strategy, and MCS type is key to improving performance.

Business Strategy (Miles & Snow 1978 Typology)

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman (1978)identify three main problems in The Adaptive Cycle: entrepreneurial, engineering, and administrative problems, with the typology of defender, prospector, analyzer, and reactor strategies. Defenders excel in efficiency, prospectors excel in marketing and innovation but are less efficient, analyzers are balanced, and reactors are inconsistent. Prospectors are more powerful in marketing, defenders and analyzers excel in profitability, while the effectiveness of strategies varies across contexts (Anwar & Hasnu, 2016; Bentley et al., 2013).

RESEARCH METHOD

This research examines public companies on the Indonesia Stock Exchange (IDX) operating in both domestic and international markets. The population includes all issuers from various sectors, with the following criteria: recorded since ≥31 December 2013 and active until 31 December 2023, to ensure the availability of 2014–2023 time series data without missing data (Indonesia Stock Exchange, 2023). The focus on the main board was chosen for its reporting completeness, stability, governance compliance, and more reliable data quality (Indonesia Stock Exchange, 2023; Keremidchiev & Kaneva, 2024).

The sample was determined through purposive sampling, including companies that have complete annual and financial reports during the research period, remain active on the IDX until 2023, and provide data on business strategy variables, Management Control

System (MCS)), performance, size, characteristics of TMT, and industry. Some sectors are excluded i.e. finance, healthcare, utilities, and oil & gas due to different operational, regulatory or MCS structure characteristics (Abernethy & Brownell, 1999; Chenhall, 2003; Lodhia et al., 2021; Truant et al., 2025).

The quantitative method was used with a longitudinal approach 2014–2023 to test the alignment of business strategies and MCS types on company performance. The analysis was carried out through the quintile method, Z-score, cluster analysis (Ward Method), and ANOVA.

Table 1. Data Collection & Analysis Methods.

	Structural Model Analysis			
1 Data collection ➡	**2** Quintile Method ➡	**3** Z-Score ➡	**4** Cluster Analysis (Ward Method) ➡	**5** ANOVA (statistical test)

The research hypothesis includes three main tests related to the influence of business strategy on performance, as well as the role of MCS as a moderation variable.

HI : Defender strategies perform better with a hierarchy or market type Management Control System (MCS) than with a clan or adhocracy-type Management Control System (MCS).

H2 : Prospector strategies perform better with a clan or adhocracy-type Management Control System (MCS) than with a hierarchy or market type Management Control System (MCS).

H3 : Strategy analyzers perform as well as all types of Management Control Systems (MCS).

RESULTS AND DISCUSSION

Characteristics of Research Samples

This study uses purposive sampling of major public companies on the Indonesia Stock Exchange for the period 2014–2023 that have been actively listed since 2013, have complete financial and annual reports for a decade, and do not come from the financial, health, utilities, and oil & gas sectors. The sample covers nine industry sectors with variations in company size and Top Management Team (TMT) composition, thus representing the diversity of industry contexts and reinforcing external validity in the analysis of business strategy relationships, Management Control System (MCS), and company performance.

Table 2. Distribution of Issuers Research Sample.

Yes	Sectors	Number of Issuers	%
1	Basic Materials	10	12%
2	Consumer Cyclicals	13	16%
3	Consumer Non-Cyclicals	17	21%
4	Energy	3	4%
5	Industrials	8	10%
6	Infrastructure	14	17%
7	Properties & Real Estate	12	15%

8	Technology	1	1%
9	Transportation & Logistics	4	5%
	Total	82	100%

Source: Indonesia Stock Exchange (2025)

Stages of Research Implementation

Table 3. Stages of Data Collection & Analysis.

	Structural Model Analysis			
1 Data collection →	**2** Quintile Method →	**3** Z-Score →	**4** Cluster Analysis (Ward Method) →	**5** ANOVA (statistical test)
	Classify the type of Business Strategy of each sample	MCS Standardization	Classify MCS types	See the relationship between Strategy-MCS with enterprise performance

Structural Model Analysis

a) Descriptive Analysis

Based on 820 observations of IDX main board companies (2014–2023), there is significant diversity in size (81–91,615 employees; average 6,547; CV 196.9%), age (average 54.57 years; CV 11.6%), and TMT structure (3–18 members; average 6.76; CV 40.1%). The average age of TMT is 58 years (CV 14.6%), with a tenure of 1.4–20 years (average 7.89; CV 52.5%). Large companies and senior TMTs tend to use the MCS hierarchy, while smaller, younger, or newly appointed ones lean towards adhocracy or market. Variations are standardized with Z-Scores to balance the contribution of each indicator in clustering and expand the generalization of findings.

b) Quintile

The classification of business strategies of 82 non-financial issuers of the IDX (2014–2023) uses the quintile scoring of six indicators (R&D/Sales, Growth/Sales, Employee/Sales, Sales/Operating Cost, Employee Variation, NPPE/Assets) in six rolling periods (P1–P6) to capture the dynamics of the strategy.

Table 4. Distribution of NPPE to Assets Ratio.

Quintile	Business Strategy Indicators	Ratings	Score	Number of Issuers
1	NPPE to Assets	1–17	1	17
2	NPPE to Assets	18–34	2	17
3	NPPE to Assets	35–50	3	16
4	NPPE to Assets	51–66	4	16
5	NPPE to Assets	67–82	5	16

Scores 6–13 = defender, 14–22 = analyzer, 23–30 = prospector, with NPPE/Assets behind the score. The result, analyzer dominating (86.6%), followed by prospectors (8.5%) and defenders (4.9%), in line with the characteristics of the sector (Bentley et al., 2013; Miles,

R. E., Snow, C. C., Meyer, A. D., & Coleman, 1978). Innovation pressures drive prospectors/analyzers, while tight regulations trigger Analyzer/Defender, with examples of EMTK, ASSA, and ESSA illustrating this dynamic.

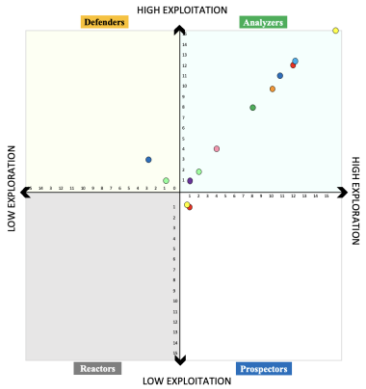

Figure 1. Typology of Business Strategy Based on Average Rolling Period.

The dominance of analyzers (92.7%) in 82 IDX issuers in 2014–2019 shows a hybrid strategy that balances efficiency and selective innovation (Jukka & Pellinen, 2020; Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, 1978). Lack of Defender and Prospector Extreme strategies are less in demand, with small variations in Consumer Cyclicals and infrastructure. These findings underscore the importance of flexibility and alignment of strategies, where MCS is in line with contingency theory and Dynamic capabilities.

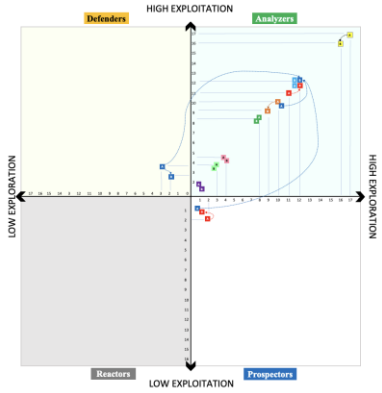

Figure 2. Business Strategy Typology Based on Average Before (2014 - 2019) and After the Covid-19 Pandemic (2020 - 2023).

Of the 82 issuers in the nine sectors of IDX, the MCS type is dominated by Market (50%) and Clan (39%), while Hierarchy (7%) and Adhocracy (4%) are rare. The market is large in basic materials and transportation, Clan in consumer cyclicals and properties, Adhocracy in technology, and Hierarchy in regulation-dense sectors such as consumer non-cyclicals and infrastructures (Cameron, K. S., & Lavine, 2006; Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, 1978; Quinn & Rohrbaugh, 1981).

Table 5. Final Cluster Centers.

Indicator	Cluster			
	1 Market	2 Hierarchy	3 Clan	4 Adhocracy
Z-score: FIRM SIZE (person)	-.13074	369.688	-.12510	-.23724
Z-score: FIRM TENUR (years)	.15366	.58953	.58006	-.52461
Z-score: TMT SIZE (person)	-.12611	-.20244	.31090	-.20731
Z-score: TMT AGE (years)	-263.588	.42983	.47461	-.09583
Z-score: TMT TENURE (years)	-.00250	.44860	.75858	-.63135

Based on the mapping of 82 issuers from nine IDX sectors, the Market type dominates (50%), followed by Clan (39%), Hierarchy (7%), and Adhocracy (4%). Distribution reflects the tendency of public companies in Indonesia to prioritize product orientation and efficiency (market) or collaboration and value (clan), while bureaucratic systems (hierarchy) and innovative (adhocracy) are rare (Quinn & Rohrbaugh, 1981; Jukka & Pellinen, 2020; Jukka, 2021). Sector variations show competitive pressures driving the market (basic materials, transportation), The need for adaptation triggers the clan (consumer cyclicals, properties), while innovative industries lean towards adhocracy (Technology) and the regulatory intensive sector maintains hierarchy (consumer non-cyclicals, infrastructures) (Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, 1978).

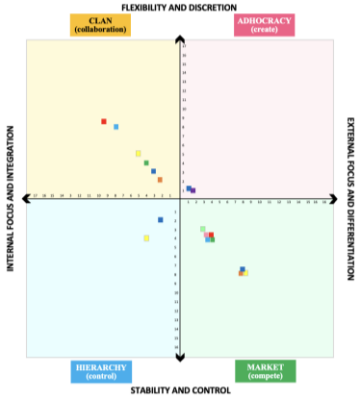

Figure 3. Type of MCS Based on Average During the Research Period (2014 – 2023).

Before the Covid-19 pandemic (2014–2019), an analysis of 82 IDX issuers showed the dominance of market-type MCS (43 companies), which emphasized productivity, efficiency, and goal achievement (Cameron, K. S., & Quinn, 1999), in line with economic stability and a competitive but predictable business climate. Clan (31) stands out in sectors that require adaptation and consumer loyalty, while Hierarchy (6) supports regulatory-dense sectors and complex supply chains (Malmi & Brown, 2008; Ouchi, 1979). Adhocracy (2) is still rare, relevant to innovation and high uncertainty (Cameron, K. S., & Quinn, 1999; Marginson, 2002). This distribution is according to contingency theory (Donaldson, 2001; Peters et al., 1985), indicates a balance between results-oriented and internal capability development in the era of stable economic growth (Central Statistics Agency, 2020).

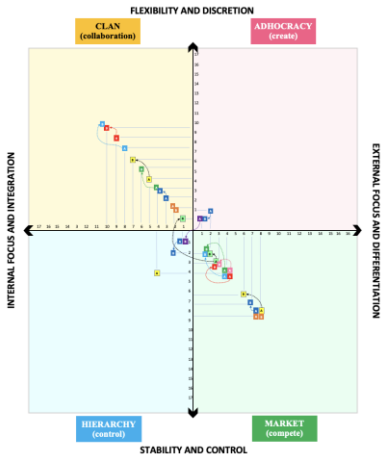

Figure 4. Type of MCS Based on Average Before (2014 – 2019) and After the Covid-19 Pandemic (2020 – 2023)

In the post-pandemic period (2020–2023), Indonesian public companies showed a shift in MCS towards Clan (41 companies) and Market (33), with Hierarchy (7) and Adhocracy (1) much less. Clan's dominance reflects its focus on collaboration and human resource development, while the Market remains strong in efficiency-based sectors such as raw materials, energy, and transportation. Hierarchy is used in sectors that demand process compliance, and Adhocracy only appears in specific cases in digital infrastructure. An analysis of 820 observations revealed that the Analyzer strategy was most often combined with Market (40.1%) and Clan (37.1%), in contrast to the more international patterns in Hierarchy and Clan. Prospectors in Indonesia prefer the Market, and Defenders more often use the Market rather than the Hierarchy, influenced by the institutional context, national culture, and market pressures. These findings confirm that, in addition to contingency theory, cultural and institutional factors also shape the choice of strategy–MCS in Indonesia.

Table 6. Business Strategy Cross-Tabulation Results-MCS (detailed)

MCS		Typology			
		Analyzers	**Defenders**	**Prospector**	**Total**
Adhocracy	Expected Count	62,4	4,30	4,20	71,0
	% within MCS	69.0%	15.5%	15.5%	100.0%
	% within Typology	6.8%	22.0%	22.4%	8.7%
	% of Total	6.0%	1.3%	1.3%	8.7%
Clan	Expected Count	286,6	19,9	19,5	326,0
	% within MCS	93.3%	3.1%	3.7%	100.0%
	% within Typology	42.2%	20.0%	24.5%	39.8%
	% of Total	37.1%	1.2%	1.5%	39.8%
Hierarchy	Expected Count	51,9	3,6	3,5	59,0
	% within MCS	66.1%	16.9%	16.9%	100.0%
	% within Typology	5.4%	20.0%	20.4%	7.2%
	% of Total	4.8%	1.2%	1.2%	7.2%
Market	Expected Count	320,1	22,2	21,8	364,0
	% within MCS	90.4%	5.2%	4.4%	100.0%
	% within Typology	45.6%	38.0%	32.7%	44.4%
	% of Total	40.1%	2.3%	2.0%	44.4%

Total	Expected Count	721,0	50,0	49,0	820,0
	% within MCS	87.9%	6.1%	6.0%	100.0%
	% within Typology	100.0%	100.0%	100.0%	100.0%
	% of Total	87.9%	6.1%	6.0%	100.0%

In line with Jukka (2021), the success of the strategy depends on its suitability with the MCS type, which is influenced by context and environment (Miles & Snow, 1978; Quinn & Rohrbaugh, 1981). Before the pandemic (2014–2019), the dominance was in Analyzer–Market (41) and Analyzer–Clan (24), reflecting a balance of efficiency and innovation, such as SMGR (analyzer–market) and MAPI (analyzer–clan). Defender and Prospector strategies rarely appear. Post-pandemic (2020–2023), a similar pattern persisted with the dominance of Analyzer–Clan (39) and Analyzer–Market (30), but the shift towards collaboration and HR development was more pronounced, while highly bureaucratic or highly flexible MCS options were increasingly used.

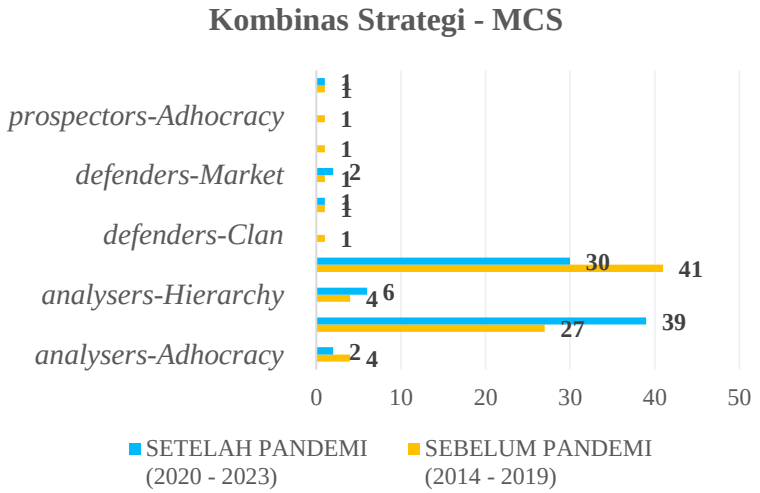

Figure 5. Results of Strategy-MCS Combination Based on Average Before (2014 – 2019) and After the Covid-19 Pandemic (2020 – 2023)

PT Mitra Adiperkasa Tbk (MAPI) maintains the analyzer–clan before and after the pandemic, focusing on collaboration, human resources, and digital innovation. PT Semen Indonesia (Persero) Tbk (SMGR) uses Analyzer that is a market for efficiency and expansion. Analyzer–clan Supporting learning, the analyzer, which is the market, emphasizes performance (Chenhall, 2003; Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, 1978). Hierarchy for compliance, Adhocracy for innovation (Cameron, K. S., & Lavine, 2006). SMDR switched from market to clan for adaptation. Post-pandemic defenders lean towards the market/hierarchy, prospectors are rare due to risks such as SCMA turning to Prospector–Market. Generally, MCS shifted from market to clan post-pandemic (Jukka & Pellinen, 2020; Otley, 2016), with Analyzer most adaptive. Ward's linkage confirms the dominance of analyzers in homogeneous clusters, partial defenders joining, prospectors separated over large distances, forming strategic convergence and diversity. The concentration of analyzers in Indonesia is higher than in Finland, according to the culture of avoiding uncertainty.

Figure 6. Dendogram.

Ward linkage has been shown to be effective and valid for grouping MCS, consistent with theory and sensitive to outliers (Bentley et al., 2013; Jukka & Pellinen, 2020). An analysis of 82 IDX issuers (2014–2023) shows that the suitability of the MCS strategy affects ROA, with different optimal combinations per sector: Prospector–Market excels in consumer cyclicals (ROA 25.78%), Analyzer–Adhocracy is effective in infrastructure (6.93%) but weak in logistics, Analyzer–Clan succeeds in consumer non-cyclicals (5.70%) but fails in energy, while Analyzer–Market is dominant in capital-intensive sectors (up to 12.88%). These findings confirm the principle of Contingency Theory that the effectiveness of MCS depends on sector characteristics and environmental dynamics.

Table 7. Tabulation of the distribution of business strategy-MCS groups by industry sector.

SB - MCS	Basic Materials	Consumer Cyclicals	Consumer Non-	Energy	Industrials	Infrastructure	Properties & Real	Technology	Transportation &	Grand Total
Analyzers-Adhocracy	8	9	5		5	12	10			49
Analyzers-Clan	19	72	55	5	43	24	80		6	304
Analyzers-Hierarcy		1	38							39
Analyzers-Market	63	28	62	15	32	65	30		34	329
Defenders-Adhocracy				10		1				11
Defenders-Clan						10				10
Defenders-Hierarcy						10				10
Defenders-Market	10					9				19
Prospector-Adhocracy		2				3		6		11
Prospector-Clan		11	1							12

Prospector-Hierarcy						6		4		10
Prospector-Market		7	9							16
Grand Total	100	130	170	30	80	140	120	10	40	820

Source: Researcher-Processed Data (2025)

Defenders-Adhocracy (ROA 1.89% energy; 0.66% infrastructure) and Defenders-Clan (1.83% of the property) Proven to be inconsistent because Defender's efficiency strategy requires tight control (Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, 1978). Defenders-Hierarchy worst (0.02% infrastructure) due to rigid structure, while Defenders-Market is better (4.15% basic materials) with target-based efficiency (Chenhall, 2003). Prospectors-Adhocracy excels in consumer cyclicals (12.91%) for market exploration (Miles & Snow, 1978). Prospectors-Clan was high in consumer cyclicals (13.80%) but weak in non-cyclicals (3%). Prospectors-Hierarchy varied, high in transportation (13.27%) but low in infrastructure (4.73%). Prospectors-Market records highest ROA.

Table 8. Average RoA Business Strategy Combination - MCS

SB - MCS	Basic Materials	Consumer Cyclicals	Consumer Non-Cyclicals	Energy	Industrials	Infrastructure	Properties & Real Estate	Technology	Transportation & Logistics	Average RoA per Combination
Analyzers-Adhocracy	2,94 %	5,65 %	4,77 %		6,93 %	4,22 %	1,28 %			4,01 %
Analyzers-Clan	3,14 %	3,49 %	5,70 %	-0,29 %	6,70 %	5,03 %	4,02 %		8,48 %	4,62 %
Analyzers-Hierarcy		9,67 %	5,83 %							5,93 %
Analyzers-Market	2,39 %	12,88 %	3,11 %	0,50 %	8,47 %	7,52 %	3,87 %		6,07 %	5,45 %
Defenders-Adhocracy				1,89 %		0,66 %				1,77 %
Defenders-Clan						1,83 %				1,83 %
Defenders-Hierarcy						0,02 %				0,02 %
Defenders-Market	4,15 %					2,88 %				3,55 %
Prospector-Adhocracy		12,91 %				7,50 %		2,67 %		5,85 %
Prospector-Clan		13,80 %	3,00 %							12,90 %
Prospector-Hierarcy						4,73 %		13,27 %		8,15 %
Prospector-Market		25,78 %	7,88 %							15,71 %

Average RoA per Sector	2,75 %	7,92 %	4,85 %	0,83 %	7,42 %	5,40 %	3,75 %	6,91 %	6,43 %	5,22 %

Prospector–Market has the highest superior (ROA 25.78% consumer cyclicals) according to Resource-Based Theory (Barney, 1985). There is no universal Strategy–MCS combination; Conformity to the context determines performance (Chenhall, 2003). Prospector–Market and Analyzer–Market are effective, while Defender–Hierarchy is an example of misalignment.

c) ANOVA

ANOVA was chosen because it was able to compare 12 strategy–MCS combinations simultaneously, reduce the risk of errors from multiple t-tests, and save time. Two-way ANOVA can show the relationship of four types of MCS and three business strategies, separate systematic and random variances, and overcome sample imbalances (Cameron, K. S., & Lavine, 2006; Jukka & Pellinen, 2020). This method is relevant to contingency theory, which asserts that there is no perfect MCS; only the suitability of the strategy–MCS determines performance.

The One-Way ANOVA test was used to compare the ROAs in 12 groups of strategy–MCS combinations, according to the purpose of the study, to test the differences in performance between independent groups simultaneously.

Table 9. ANOVA for Bound Variables (ROA).

	Sum of Square	df	Mean Square	F	Sig.
Between Groups	3.348.248	11	304.386	6.547	<.001
Within Groups	37.565.765	808	46.492		
Total	40.914.010	819			

The combination of business strategy and MCS type affects the company's performance, but its contribution is small to medium. An eta-squared value of 0.082 indicates 8.2% variation in ROA explained by group differences. The epsilon-squared and omega-squared fixed-effect of 0.069 each confirmed similar results, with omega-squared as a conservative effect measure that affirmed the real but not dominant effect.

Table 10. ANOVA Effect Sizes Calculation.

			95% Confidence Interval	
		Point Estimate	Lower	Upper
LONG (%)	Eta-squared	.082	.039	.108
	Epsilon-squared	.069	.026	.095
	Omega-squared Fixed effect	.069	.026	.095
	Omega-squared Random effect	.007	.002	.009

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

A very small omega-squared random-effect (0.007) suggests that in a broad population or random sampling, the variation in ROA explained by group differences is almost zero, so the context of the sample becomes crucial and generalizations must be careful.

After ANOVA ($F = 6.547$; $p < 0.001$) showed significant differences between strategy–MCS combinations, a post hoc Games-Howell was conducted because it did not assume homogeneity of variance and was able to handle sample imbalances (Sekaran & Bougie, 2016). The test compares each combination of the MCS–strategy with eleven others

to identify superior or inferior pairs, find performance patterns according to the competing values framework, contingency theory, and Miles & Snow (1978)

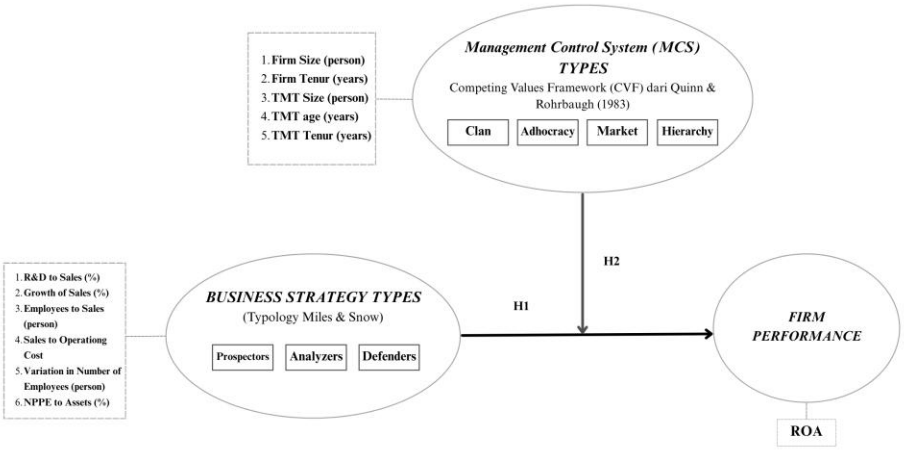

Figure 7. Research Design.

Of the 820 observations with an unbalanced distribution, One-Way ANOVA was used to test the difference in performance between the strategy–MCS combinations. The results show that Analyzer is adaptive to all types of MCS, with a significant advantage over only Defender–Hierarchy and Defender–Adhocracy, while Prospector stands out when combined with Clan or Market. Prospectors–Market is a winning combination, resulting in six significant differences out of 11 comparisons and Prospector–Clan equivalent performance, supporting the strategic fit theory that external focus, competitive drive, and outcome orientation reinforce Prospector's advantage. In contrast, the Prospector–Hierarchy has a mismatch, and the Defender–Hierarchy underperforms despite being theoretically ideal. These findings confirm that the suitability of the MCS strategy is important, but optimal combinations such as Prospectors–Market can provide superior performance only if supported by execution and organizational readiness.

d) Conclusion of Post Hoc Test Results Analysis - Games-Howell

The results of the Post Hoc Test Games-Howell on 12 combinations of business strategies and MCS types show that financial performance (ROA) is highly dependent on the suitability of the MCS–strategy. Defender performs better with MCS Market and Hierarchy than Clan or Adhocracy, confirming that efficiency-oriented strategies require formal, structured control. In contrast, Prospector excels with MCS Clan and Adhocracy that support flexibility and innovation, as per contingency theory and the findings of Chenhall (2007). The analyzer is proven to be adaptive across MCS types with no significant differences, reflecting the hybrid nature of balancing efficiency and innovation. Overall, no type of MCS is universally superior; its effectiveness is largely determined by strategic fit as Miles & Snow assert (1978), Competing Values Framework (Duckworth & Quinn, 2009), as well as empirical evidence from Jukka & Pellinen (2020).

Discussion

H1: Defender strategies perform better with hierarchy or market-type MCS than clan or adhocracy-type MCS.

The results of the study show that the Defend with Market-type MCS (ROA 3.55%) provides significantly higher performance than the combination Defend others, while

Defender-Hierarchy is actually the lowest (ROA 0.02%), contrary to Miles & Snow's prediction (1978). This difference is explained by Contingency Theory (Chenhall, 2003), where Indonesia's competitive and dynamic context makes the orientation of results and external accountability in the Market type more effective than the bureaucratic rigidity of the hierarchy, as seen in PT WIKA, which is slow to adapt, while PT Indofood has succeeded in integrating the Defender-Market through cost efficiency and measurable targets. Culture "High Power Distance", which weakens the effectiveness of an overly centralised hierarchy. In line with the Competing Values Framework, these findings confirm that H1 only applies to Defender-Market in the context of Indonesia.

H2: Prospector strategies perform better with clan or adhocracy-type MCS than hierarchy or market-type MCS.

The results confirm that the Prospector strategy is most effective when combined with Clan or Adhocracy-type MCS, fully supporting H2 and in line with the Miles & Snow theory (1978) and Competing Values Framework which emphasizes the need for flexible, collaborative, and risk-tolerant control systems to drive innovation. An example of success can be seen in PT Aspirasi Hidup Indonesia Tbk (ACES) which with MCS Adhocracy is able to innovate quickly, while the failure to adapt was experienced by PT Elang Mahkota Teknologi Tbk (EMTK) due to MCS Market which is too focused on short-term targets. In line with findings (Jukka, 2023), Clan and Adhocracy proven to increase organizational agility, although its effectiveness still depends on industry characteristics, such as in the agricultural sector where the Clan is less than optimal due to the high influence of global commodity prices.

H3: Strategy analyzers perform just as well as all types of MCS.

The results showed that the Analyzer company did not have a significant performance difference between the use of MCS type Hierarchy, Market, Clan, or Adhocracy, so Hypothesis 3 is supported. As a hybrid strategy between Prospector and Defender, Analyzer is able to balance efficiency and innovation, allowing adaptation to different types of MCS. For example, in Indonesia, PT Unilever Indonesia Tbk (MLBI) and PT Astra International Tbk (ASII) recorded a stable ROA of 8–10% during 2014–2023 despite using different combinations of MCS. These findings are consistent with studies Jukka (2023) which states that the Analyzer is "neutral" to the MCS type due to its flexibility, although this stability reflects more of the adaptability capacity than the specific advantages of an MCS.

CONCLUSION

This study comprehensively emphasizes that the alignment between business strategy and the type of Management Control System (MCS) is the main determinant in achieving superior corporate performance in Indonesia, especially in a very dynamic and challenging business environment. Through a longitudinal analysis of multi-sector issuers on the Indonesia Stock Exchange over a decade that crossed various global crises, this study proves that the Prospector strategy combined with Clan or Adhocracy-type MCS consistently produces Return on Assets (ROA) is the highest. This combination has proven to be able to drive flexibility, cross-functional collaboration, and innovation that are crucial in exploring new opportunities and expanding market share, so that companies can survive and even grow in the midst of external uncertainty. In contrast, the Prospector strategy combined with the

Hierarchy or Market type MCS tends to be less optimal, as the dominance of the bureaucratic structure and orientation to short-term targets limits the space for experimentation and organizational learning. This proves that innovation and adaptation can only thrive in a controlled environment that supports collaboration and decentralization of decision-making.

For the Defender strategy, this study found that market-type MCS is more effective in maintaining stability and operational efficiency, especially amid market competition pressures and economic volatility. Large companies that adopt market results-based control systems are able to maintain stable performance and competitiveness in the midst of external fluctuations. These findings mark a paradigm shift away from the classic approach that pairs Defender with Hierarchy, towards a preference for Market-type MCS that is more responsive to market dynamics and results-based efficiency needs.

The Analyzer strategy shows a very high level of flexibility, with relatively stable and optimal performance on all types of MCS. This confirms the Analyzer's ability to simultaneously balance the demands of innovation and efficiency, and adapt effectively to changes in the environment and variations in the control system applied. This adaptive capability is the main advantage of Analyzer in dealing with market uncertainty and complexity.

The study also highlights the importance of contextual factors such as company size, characteristics and experience of the Top Management Team (TMT), as well as industry type as a moderator in the relationship between business strategy and MCS on company performance. These variables have been proven to affect the effectiveness of the implementation of management control strategies and systems, so the selection of the right combination of business strategy and MCS should be based on the specific characteristics and unique needs of each company. A uniform approach without considering the internal and external context risks lowering organizational performance and competitiveness.

Overall, this study confirms that the success and resilience of companies in Indonesia are highly determined by the ability to adapt business strategies and Management Control Systems (MCS) adaptively and contextually. The integration of strategic orientation, precise MCS design, and visionary TMT leadership is the key foundation for creating a sustainable competitive advantage amid ever-changing global challenges. This conclusion reinforces the urgency of an alignment and fit-based strategic management approach, and confirms that organizations that are able to read environmental dynamics and respond to them intelligently will be able to survive, grow, and become leaders in their respective industries.

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