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The Moderating Role of the Lever of Control (LoC) in the Impact of Culture, Strategy, and Environmental Uncertainty on Firm Performance

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ABSTRACT

This study examines the impact of corporate culture, strategic orientation, and environmental uncertainty on firm performance, focusing on the moderating role of the Lever of Controls (LoC). Primary data were collected through a survey involving 203 respondents from both listed and unlisted companies in Indonesia on the Indonesia Stock Exchange. Firm performance was measured using customer satisfaction, revenue, profit growth, return on investment, and market share. The findings reveal that corporate culture and strategic orientation significantly enhance firm performance. However, environmental uncertainty was found to have no direct impact on business performance. Furthermore, the moderating role of the LoC was not validated, suggesting that the relationship between management control systems and performance is complex and requires further investigation, particularly in uncertain environments. This research provides valuable insights for practitioners, emphasizing that firm performance is strongly influenced by corporate culture, strategic orientation, and effective management of environmental uncertainty.

Keywords: *Corporate Culture; Environmental Uncertainty; Firm Performance; Lever of Controls; Strategic Orientation*

1. Introduction

Firm performance is a critical determinant of a company's growth and long-term success, serving as a key measure of an organization's effectiveness in achieving its goals and objectives (Khaireddine et al., 2024; Laksana et al., 2022). Strong performance demonstrates a company's ability to meet its objectives, significantly shapes its organizational framework, drives its development, and sustains its competitive advantage (Liang & Gao, 2020). It is fundamental to organizations' overall health and strategic direction, influencing their ability to adapt and thrive in dynamic markets.

Given its importance, understanding the factors that drive firm performance has become a central focus in strategic management research, particularly in an increasingly globalized and technologically advanced business environment (Omri et al., 2024). Among the key factors influencing firm performance, three aspects stand out: corporate culture, strategic orientation, and environmental uncertainty. These elements interact in complex ways, creating conditions that can foster or hinder firm success depending on how effectively they are managed.

Corporate culture, in particular, plays a vital role in shaping employee behavior, attitudes, and overall organizational outcomes (Fan & Chung, 2023). A strong and positive corporate culture fosters a sense of belonging among employees, strengthens their commitment to organizational goals, and promotes innovation by encouraging knowledge-sharing and collaboration (Aryani et al., 2021). Beyond internal norms and practices, corporate culture is a strategic asset directly impacting an organization's market performance (Khizar et al., 2024). Companies that cultivate a culture of collaboration, adaptability, and innovation are better positioned to overcome challenges and seize new opportunities.

Strategic orientation is a crucial determinant of firm performance, shaping how organizations position themselves competitively in the market and align their resources, capabilities, and operations with long-term objectives (Arun & Özmutlu, 2023). A well-defined strategic orientation enables firms to navigate competitive pressures effectively, make informed decisions, and implement strategies that enhance market performance. Beyond setting a company's trajectory, strategic orientation ensures adaptability, enabling organizations to respond proactively to changes in their external environment (Chaudhary et al., 2023). By aligning plans with market demands and anticipating industry trends, firms can sustain competitive advantages and achieve superior performance.

An effective strategic orientation provides a framework for addressing challenges and capitalizing on opportunities by aligning resources with market needs. It shapes corporate activities, ensuring actions align with long-term goals and fosters behaviors necessary for success in competitive environments (Iqbal et al., 2023). This strategic approach allows firms to respond to market demands and maintain focus on innovation, continually refining strategies to stay ahead of competitors.

In today's rapidly evolving business landscape, characterized by fluctuating customer preferences, technological advancements, and shifting market dynamics, strategic orientation plays a dynamic and indispensable role. Organizations with adaptive strategies are better positioned to adjust their plans to meet emerging challenges and seize opportunities as they arise. This adaptability ensures that firms maintain innovation and relevance, enhancing their ability to compete and succeed in the marketplace (Iqbal et al., 2023).

Strategic orientation impacts multiple aspects of a business, including internal structures, operational processes, investment decisions, stakeholder relationships, and overall market performance. It is particularly vital for small and medium-sized enterprises (SMEs) operating in highly competitive industries where resources are often constrained. SMEs that adopt coherent

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strategic approaches can carve out market niches, overcome resource limitations, and achieve sustainable growth (Pešalj et al., 2018). Strategic orientation, therefore, is not merely a tool for large corporations but a critical driver of success across businesses of all sizes.

Organizations often adopt diverse strategic orientations, such as product innovation, customer-centricity, or cost leadership, to navigate competitive markets effectively. Given the complexity of modern marketplaces, relying solely on a single strategic orientation is often insufficient. Instead, combining approaches, such as integrating market orientation with innovation orientation, enables firms to align their strategies with consumer demands while prioritizing innovation. This synergy has been shown to improve overall performance outcomes (Barros & Ferreira, 2022). Balancing multiple strategic orientations enhances an organization's adaptability and responsiveness to evolving market needs (Cheng & Shiu, 2020).

However, an excessive focus on one strategic direction at the expense of others can undermine performance. For example, prioritizing innovation while neglecting market demands or focusing solely on cost reduction without investing in product development can adversely affect firm outcomes (Frare et al., 2022). Organizations must carefully evaluate and balance their strategic orientations to achieve sustained success in complex and dynamic markets. This comprehensive approach to strategic management ensures resilience and sustained performance amidst contemporary challenges.

The COVID-19 pandemic (2020–2022) exemplified the need for strategic adaptability as it dramatically reshaped the global economic landscape. Governments worldwide imposed extensive social restrictions, such as Indonesia's PSBB (*Pembatasan Sosial Berskala Besar*, or Large-Scale Social Restrictions), compelling businesses to adjust to new operational realities rapidly. In such uncertain conditions, a company's ability to implement strategic adjustments became essential for maintaining a competitive edge. Organizations must address immediate challenges while preparing for future disruptions to sustain competitiveness in volatile markets.

Uncertainty, by its nature, reflects an inability to predict outcomes accurately. During the pandemic, businesses encountered heightened uncertainty, facing unprecedented disruptions across all sectors. These evolving dynamics demanded continuous strategic adjustments to address emerging challenges and ensure survival. Environmental uncertainty—stemming from natural and artificial causes—significantly influences a company's present and future performance and financial stability (Latan et al., 2018). Effectively managing such uncertainty is critical for firms that navigate volatile business environments while safeguarding their long-term viability.

Environmental uncertainty manifests in various forms, encompassing ambiguity about prevailing conditions, their potential impacts, and the appropriate responses (Milliken, 1987). Such uncertainties can significantly disrupt a company's operations and performance in the short and long term. To mitigate these challenges, companies require robust management control systems to monitor, adapt, and realign their activities following strategic objectives, particularly in unpredictable environments. These systems foster organizational resilience and maintain operational efficiency during unforeseen disruptions.

Uncertainty is divided into three dimensions: state uncertainty, which refers to the ambiguity surrounding external conditions; influence uncertainty, which focuses on the impact of external factors; and response uncertainty, which involves deciding the best strategic actions to take. These uncertainties can jeopardize a company's long-term survival and competitiveness. This highlights the need for proactive and adaptive management systems that address immediate risks and anticipate future challenges, ensuring sustainable performance. In the post-pandemic era, where business environments continue to evolve rapidly, effective

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uncertainty management has become even more critical for organizations striving to remain competitive.

The Levers of Control (LoC) framework, introduced by Simons, provides a comprehensive management control system designed to ensure the successful implementation of corporate strategies, particularly in uncertain contexts (Simons, 1995). The LoC framework enables organizations to navigate dynamic and volatile environments by achieving strategic objectives while maintaining flexibility and adaptability. This approach is especially valuable for innovation-driven enterprises, as it facilitates managing and aligning innovation processes with overarching organizational goals (Barros & Ferreira, 2022). By integrating the LoC framework, companies can effectively balance strategic focus with operational agility, ensuring resilience and long-term success.

The Levers of Control (LoC) framework comprises four interconnected components: belief systems, boundary systems, diagnostic controls, and interactive controls (Simons, 1995). Each lever plays a distinct role in shaping organizational behavior and decision-making. Belief systems articulate the core values and principles of the organization, inspiring employees to align their actions with the company's overarching mission. Boundary systems establish clear behavioral guidelines, preventing deviations from strategic objectives. Diagnostic controls monitor organizational performance by comparing actual outcomes with predefined targets, while interactive controls encourage collaboration and innovation through dynamic engagement within the organization.

Integrating these elements fosters an environment that supports innovation while maintaining organizational discipline. As a moderating variable, the LoC framework strengthens the relationships among corporate culture, strategic orientation, and environmental uncertainty, ultimately enhancing firm performance. By leveraging the LoC framework, organizations can maintain strategic focus and adaptability, enabling them to navigate market fluctuations and capitalize on their internal strengths, such as a robust corporate culture and effective strategic direction, to thrive in uncertain environments.

This study examines the influence of corporate culture, strategic orientation, and environmental uncertainty on firm performance, with the LoC framework serving as a moderating variable. The research aims to contribute to developing strategic management theory while providing actionable insights for organizations seeking to optimize performance in dynamic and unpredictable business contexts.

2. Literature Review

Corporate culture is widely recognized as a critical factor influencing business performance, shaping employee behavior, strategic decision-making, and overall organizational outcomes. In today's increasingly dynamic and competitive environments, its role in driving performance has become even more pronounced (Quinn & Cameron, 2019). Corporate culture aligns internal processes with external market demands and equips organizations to respond effectively to emerging challenges and opportunities.

The Competing Values Framework (CVF), introduced by Quinn and Cameron, provides a prominent model for examining the relationship between corporate culture and firm performance. It categorizes corporate cultures into four distinct types: Clan, Adhocracy, Market, and Hierarchy. Each type represents unique characteristics that influence strategic objectives and enhance performance. For instance, clan culture emphasizes collaboration and teamwork, and adhocracy fosters creativity and risk-taking, market culture prioritizes competitiveness,

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and hierarchical culture values structure and control. Understanding these cultural types is essential for aligning corporate culture with desired performance outcomes.

Corporate culture has also been explored through its role in fostering collaboration and teamwork. While some cultural elements are deeply ingrained, others can be adapted to address emerging challenges (Balthazard et al., 2006). Organizations that adjust their structures and leverage employee capabilities in response to external changes are better positioned to maintain competitiveness in volatile business environments.

Leithy applied the CVF to investigate the impact of corporate culture on firm performance, finding that Clan and Adhocracy cultures are particularly effective in promoting employee engagement and fostering creativity (Leithy, 2017). These findings highlight the importance of aligning cultural frameworks with strategic objectives, especially in dynamic environments where innovation and collaboration drive success.

Theories of organizational culture have evolved to emphasize its significant influence on organizational outcomes. When corporate culture aligns with strategic goals, it becomes a powerful tool for enhancing performance and achieving sustainable growth. Such alignment ensures that an organization's values, behaviors, and practices consistently support its overarching strategy, resulting in improved performance and a sustained competitive advantage.

2.1. Strategic Orientation and Firm Performance

Strategic orientation refers to an organization's approach to achieving competitive advantage and enhancing performance. It encompasses various dimensions, including market orientation, entrepreneurial orientation, technology orientation, and learning orientation. These approaches guide firms in navigating market fluctuations, fostering innovation, and improving overall performance. Research suggests that integrating multiple orientations can provide a comprehensive perspective on market dynamics and significantly enhance organizational performance.

Alliance orientation, as one key approach, focuses on collaborative relationships and networks with industry partners. These alliances enable firms to share resources and expertise, strengthening their competitive position in dynamic markets. Similarly, market orientation emphasizes the importance of gathering and utilizing information about customers, competitors, and market trends. This equips organizations to respond effectively to customer needs and adapt to shifting market conditions, fostering long-term success (Pittino & Visintin, 2009).

However, strategic orientation often faces challenges due to environmental uncertainty, which complicates decision-making and hinders an organization's ability to anticipate and respond to changes in the market environment. Huang et al. classify environmental uncertainty into three types: effect uncertainty, which refers to the inability to foresee the consequences of changes; state uncertainty, which involves difficulties in anticipating future conditions; and response uncertainty, which reflects the challenge of determining appropriate actions to address changes (Huang et al., 2023). These uncertainties can disrupt strategic efforts, making it essential for firms to embed flexibility and adaptability into their strategies to navigate complex and volatile markets effectively.

2.2. Environmental Uncertainty and Firm Performance

Environmental uncertainty refers to the inability to predict the impact of external factors on decision-making outcomes accurately. It is characterized by insufficient information and

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difficulty in assessing risks, making adaptability essential for organizations operating in unpredictable environments. Companies that respond effectively to environmental uncertainty can maintain operational continuity and enhance performance, particularly in the sustainability-driven business landscape (Bresciani et al., 2023).

2.3. Levers of Control (LoC) Framework

The Levers of Control (LoC) framework, introduced by Simons, provides a comprehensive methodology for understanding how management control systems balance the dual needs of fostering innovation and maintaining regulatory oversight (Simons, 1995). This framework is particularly beneficial for organizations aiming to promote creativity while ensuring alignment with strategic objectives. The LoC framework consists of four interconnected components—belief systems, boundary systems, diagnostic controls, and interactive controls—that collectively shape organizational behavior and ensure performance.

Belief systems communicate the core values and objectives of an organization, motivating employees to pursue innovation while aligning their efforts with overarching strategic goals. Boundary systems establish clear behavioral constraints to prevent actions that could jeopardize organizational objectives. Diagnostic controls monitor performance by comparing actual results with predefined targets, ensuring alignment with strategic priorities. Interactive controls facilitate collaboration, active communication, and continuous feedback, fostering a culture of innovation and adaptability across the organization.

These levers harmonize creativity with operational discipline, enabling organizations to achieve their strategic objectives while maintaining flexibility and resilience. The LoC framework is particularly effective in high-uncertainty environments, where stability and adaptability are essential for sustaining competitive advantage (Simons, 1995). The integrated application of the four LoC components has been shown to yield greater positive impacts on performance than when these elements are applied independently. This study examines the interplay among organizational culture, strategic orientation, and environmental uncertainty, with the LoC framework serving as a moderating variable, offering actionable insights for organizations navigating dynamic environments.

2.4. Conceptual Framework

The conceptual framework of this study explores the influence of corporate culture, strategic orientation, and environmental uncertainty on firm performance while considering the moderating effect of the Levers of Control (LoC) framework. This framework integrates internal organizational attributes, such as corporate culture and strategic orientation, and external factors, such as environmental uncertainty, to examine their combined impact on firm performance.

The LoC framework, comprising belief systems, boundary systems, diagnostic controls, and interactive controls, is posited as a moderating variable. It is hypothesized that the relationship between these organizational and environmental factors and firm performance should be strengthened. By incorporating the moderating role of the LoC framework, this study seeks to provide a more nuanced understanding of how firms can optimize performance amidst dynamic and uncertain market conditions.

The conceptual relationships explored in this study are presented in **Figure 1**, which visually illustrates the hypothesized interactions among corporate culture, strategic orientation, environmental uncertainty, the LoC framework, and firm performance.

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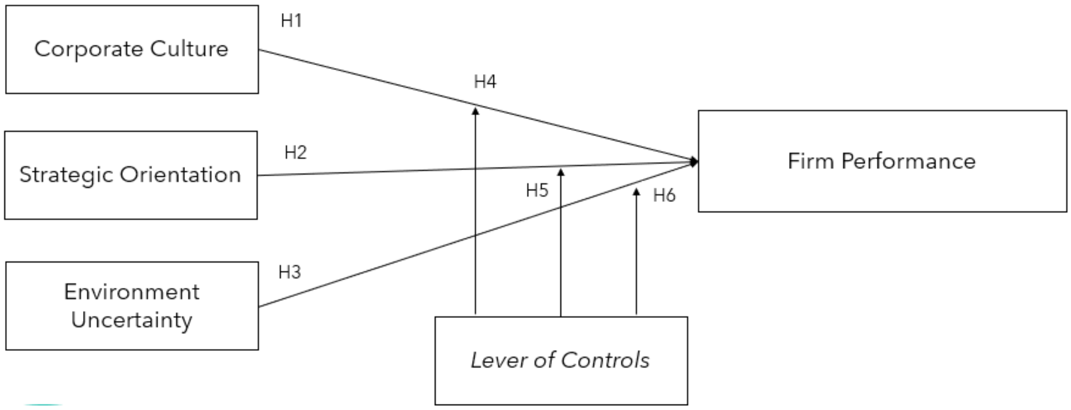

Figure 1. Conceptual Framework

This conceptual framework serves as a basis for analyzing the interconnected influences of corporate culture, strategic orientation, and environmental uncertainty on firm performance, highlighting the critical role of the LoC framework as a moderating factor.

2.5. Hypotheses Development

2.5.1. A Company's Performance is Influenced by Its Culture

Corporate culture, often referred to as organizational culture, encompasses the shared values, beliefs, and practices upheld by a corporation. This culture significantly influences employee behavior and organizational performance, either positively or negatively. Organizations with a strong and cohesive culture tend to achieve higher productivity and overall success. A robust culture fosters collaboration and alignment with organizational goals, directly enhancing performance outcomes.

Empirical evidence underscores the importance of corporate culture in driving long-term organizational effectiveness and success (Quinn & Cameron, 2019). Specifically, collaborative and innovative cultures are often associated with improved productivity and employee engagement. However, the relationship between corporate culture and performance remains debated. While many studies highlight a positive correlation between specific cultural dimensions and performance (Hartnell et al., 2011), others have found inconclusive or contradictory evidence. Grounded in these insights, this study proposes the following hypothesis:

H1: Corporate culture has a positive effect on firm performance.

2.5.2. Strategic Orientation Influences Firm Performance

To maintain efficiency and competitive advantage, firms must formulate and implement strategies that effectively integrate their industry positioning with the optimal use of resources and capabilities. Achieving enhanced performance requires businesses to ensure internal strategic coherence while adapting their strategies to align with prevailing market conditions. A firm's ability to influence customer preferences and respond to environmental and competitive changes is a hallmark of sustained competitive advantage, fostering innovative products and services.

Research consistently highlights a positive relationship between strategic orientation and firm performance, particularly market orientation, which has been shown to enhance performance outcomes strongly. However, findings on other orientations, such as technology

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orientation and alliance orientation, are less consistent. For instance, previous studies found limited or no significant links between these orientations and firm performance, suggesting that their effectiveness may depend on specific contexts or conditions (Cui & O'Connor, 2012; Prajogo & McDermott, 2011). Grounded in these insights, this study proposes the following hypothesis:

H2: Strategic orientation has a positive effect on firm performance.

2.5.3. Firm Performance is Affected by Environmental Uncertainty

Uncertainty arises when future events cannot be accurately predicted, making it challenging for decision-makers to evaluate the probability of success or failure associated with their choices. Milliken categorizes environmental uncertainty into three distinct types: impact uncertainty, which pertains to the potential effects of external changes; response uncertainty, which concerns the appropriate actions to address these changes; and state uncertainty, reflecting the unpredictability of environmental factors (Milliken, 1987). A company's competitiveness can be significantly enhanced when management has access to accurate and timely information about future market trends and developments. High-quality information allows managers to anticipate needs more effectively, enabling swift and efficient decision-making processes.

While uncertainty often poses challenges, it can also present opportunities when effectively managed. For example, Akram and Siddiqui (2019) found that environmental unpredictability in supply chains can positively influence logistics performance, highlighting the potential benefits of uncertainty in dynamic contexts (Akram & Siddiqui, 2019). These findings underscore the importance of strategic adaptability and the ability to harness uncertainty to enhance firm performance. Building on these insights, this study proposes the following hypothesis:

H3: Environmental uncertainty has a positive effect on firm performance.

2.5.4. Lever of Controls Strengthens the Influence of Corporate Culture on Firm Performance

Organizational success relies on achieving a balance between short-term and long-term objectives, internal and external focus, and creativity and control. This balance enables organizations to execute current strategies effectively while formulating new ones to adapt to evolving conditions (Simons, 1995). From a behavioral perspective, management control systems are mechanisms designed to align employee behavior with organizational objectives and manage internal interdependencies.

The Lever of Controls (LoC) framework plays a critical role in facilitating this balance by providing tools to harmonize innovation and regulation. Nuhu et al. highlighted how interactive controls within the LoC framework enhance the relationship between corporate culture and firm performance by fostering alignment and adaptability (Nuhu et al., 2019). This underscores the importance of leveraging the LoC framework to amplify the positive impact of corporate culture on performance, especially in dynamic environments. Based on these insights, this study proposes the following hypothesis:

H4: Lever of Control strengthens the positive influence of corporate culture on firm performance.

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2.5.5. Lever of Controls Strengthens the Effect of Strategic Orientation on Firm Performance

Zhuang and Duan highlight the significant positive impact of environmental management control systems on ecological sustainability, sustainable performance, and environmental strategy (Zhuang & Duan, 2023). Their findings underscore the role of control systems in aligning strategic orientations with broader performance objectives. The Lever of Controls (LoC) framework, with its capacity to balance innovation and regulation, is particularly effective in strengthening the relationship between strategic orientation and firm performance. By fostering alignment between strategic goals and operational execution, the LoC framework enhances the efficacy of strategic orientation in dynamic and competitive environments. Grounded in these theoretical insights and empirical evidence, this study proposes the following hypothesis:

H5: Lever of Controls strengthens the positive effect of strategic orientation on firm performance.

2.5.6. Lever of Controls Strengthens the Effect of Environmental Uncertainty on Firm Performance

Environmental uncertainty significantly impacts the design and effectiveness of management control systems, highlighting the need for managers to adopt accurate forecasting and adaptive strategies. The Lever of Controls (LoC) framework has shown enduring relevance in dynamic business environments where adaptability and precision are critical. Liu et al. emphasize the LoC framework's increasing importance in mitigating environmental uncertainty, suggesting its potential to enhance organizational performance in unpredictable contexts (Liu et al., 2022). Building on these insights, this study proposes the following hypothesis:

H6: Lever of Controls strengthens the positive effect of environmental uncertainty on firm performance.

3. Research Methodology

3.1. Research Design

This study adopts a quantitative research design involving the distribution of structured questionnaires to 203 respondents from various companies in Indonesia.

3.2. Sampling

The sampling technique used in this research targeted individuals in leadership positions, including directors, managers, and supervisors, from different companies in Indonesia. This approach aimed to capture diverse perspectives across hierarchical levels, providing a comprehensive understanding of organizational practices and performance.

3.3. Measurement

Firm performance was assessed using the framework established by Reino et al., which evaluates key performance variables such as customer satisfaction, sales growth, profit growth, return on investment (ROI), and market share (Reino et al., 2020). This framework, rooted in the foundational work of Quinn and Rohrbaugh, provides a holistic approach by emphasizing both financial outcomes and market-oriented results (Quinn & Rohrbaugh, 1983). Additionally, organizational culture dimensions—Clan, Adhocracy, Market, and Hierarchy—were evaluated

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using the Competing Values Framework (CVF), enabling an examination of how these cultural dimensions influence performance.

Strategic orientation was measured using a methodology adapted from Allocca and Kessler (Allocca & Kessler, 2006). This approach encompasses three critical dimensions: technological orientation, partnerships, and market orientation, capturing how firms utilize technology, alliances, and market strategies to enhance performance.

Environmental uncertainty was assessed across three dimensions—state uncertainty, consequence uncertainty, and response uncertainty—following Milliken's framework (Milliken, 1987). This metric provided valuable insights into organizational perceptions and responses to fluctuating external conditions.

The Lever of Controls (LoC) framework was evaluated through four dimensions: belief systems, boundary systems, diagnostic control systems, and interactive control systems. These dimensions are grounded in Simons' original framework, offering a comprehensive perspective on the role of management control systems in the interplay between strategic orientation, environmental uncertainty, and firm performance (Simons, 1995).

3.4. Data Collection

Primary data were collected using structured questionnaires. Responses were measured on an ordinal scale using a six-point Likert scale. The questionnaire also captured demographic and professional information about the respondents, focusing on individuals working in leadership positions, such as directors, managers, and supervisors in Indonesian companies.

3.5. Data Analysis

The validity and reliability of the study instruments were evaluated using convergent validity measures in the context of reflective indicators. The correlation between each item and its respective construct was assessed using Partial Least Squares (PLS). Reflective indicators were deemed valid if their correlation with the construct exceeded 0.70. However, for exploratory studies, loading values between 0.50 and 0.60 were considered acceptable (Chin, 1998).

The explanatory power of the model was evaluated using R-square values for the dependent latent variables, providing insight into how well the independent variables predicted the dependent outcomes. Higher R-square values indicate stronger predictive power, reinforcing the model's reliability and robustness.

The econometric model used in this study is as follows:

$$FP = a + \beta 1CC + \beta 2SO + \beta 3EU + \beta 4LoC + \beta 5(CC \cdot LoC) + \beta 6(SO \cdot LoC) + \beta 7(EU \cdot LoC) + \varepsilon$$

Where:
FP: Firm Performance
a: Constant Coefficient
CC: Corporate Culture
SO: Strategic Orientation
EU: Environmental Uncertainty
LoC: Lever of Controls
ε: Error Term

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This model integrates the moderating role of the Lever of Controls to examine its effect on the relationships between corporate culture, strategic orientation, environmental uncertainty, and firm performance.

4. Results and Discussion

4.1. Descriptive Statistics

The survey for this study involved participants from various industry sectors across Indonesia. The largest group of respondents came from the technology sector, with 53 participants accounting for 26% of the total sample. This was followed by the industrial sector, comprising 37 respondents (18%), and the consumer cyclical sector, which included 16% of the participants. This diverse representation of industries strengthens the robustness and generalizability of the data.

Regarding occupational roles, the sample was predominantly composed of supervisors, who made up 48.3% of respondents. Managers accounted for 27.3%, followed by division heads at 13.7% and directors at 10.7%. This distribution highlights the inclusion of participants from various levels of organizational management, providing valuable insights from a broad spectrum of leadership perspectives.

In terms of educational attainment, the majority of respondents (71.2%) held a Bachelor's degree (S1). Additionally, Diploma III holders comprised 14.1%, while those with a Master's degree (S2) represented 13.7%. A small proportion of respondents (1%) held a Doctoral degree (S3). This variation in educational backgrounds enhances the representativeness of the sample, ensuring that the findings reflect diverse levels of academic qualifications within the business environment.

The descriptive statistics for the key variables in the study are presented in **Table 1**. The table provides the mean, minimum, maximum, standard deviation, and number of observations for each variable. These statistics offer an overview of the data distribution and variability across the sample.

Table 1. Descriptive Statistics

Variable	Mean	Min	Max	Standard Deviation	Observations
Corporate Culture	4.914	1.000	6.000	1.138	203
Environmental Uncertainty	4.339	1.000	6.000	1.293	203
Firm Performance	5.001	1.000	6.000	1.027	203
Lever of Controls	4.999	1.000	6.000	1.041	203
Strategic Orientation	4.903	1.000	6.000	1.090	203

Table 1 provides important insights through descriptive statistics. The mean score for corporate culture is 4.914 out of a possible 6, with a range of 1 to 6, indicating a predominantly positive perception of corporate culture among respondents. Strategic orientation follows closely, with a mean score of 4.903, suggesting that organizations are seen as strategically focused on adaptation and competitiveness. Environmental uncertainty has a moderate average score of 4.339, reflecting a modest perception of unpredictability in the external environment.

The Lever of Controls (LoC), serving as the moderating variable, recorded the highest mean score of 4.999, suggesting that respondents perceive their organization's management control systems as robust and effective. Meanwhile, the dependent variable, firm performance,

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achieved the highest overall average score of 5.001, indicating a generally favorable perception of organizational success among respondents.

In summary, the LoC demonstrated the highest average score among the factors, surpassing corporate culture, strategic orientation, and environmental uncertainty. Additionally, the high average score for firm performance underscores a strong overall impression of organizational success within the sample.

The validity test results, assessed through outer loading values, demonstrated that all study indicators were valid, with one exception: the hierarchy indicator, which recorded an outer loading value of 0.492. Since this value falls below the acceptable threshold of 0.5, adjustments were necessary to ensure the model's validity. After removing the hierarchy indicator, the outer loading values for all remaining indicators exceeded the required threshold of 0.5, confirming their validity.

These adjustments eliminated the need for further refinements, as the model now meets the required validity standards. This ensures the robustness and reliability of the measurement instruments used in the study.

Table 2. Discriminant Validity Test

Variables	Average Variance Extracted (AVE)
Corporate Culture	0.556
Strategic Orientation	0.661
Environmental Uncertainty	0.584
Lever of Controls	0.695
Firm Performance	0.682

The discriminant validity test results in **Table 2** show that the Average Variance Extracted (AVE) values for all variables—corporate culture, strategic orientation, environmental uncertainty, Lever of Controls, and firm performance—are above the threshold of 0.5. This indicates that the constructs in the research model exhibit adequate discriminant validity. Essentially, this confirms that each variable is distinct and captures a unique aspect of the research framework.

The AVE values exceeding 0.5 also suggest that the latent variables explain a significant portion of the variance in their respective indicators, which supports the robustness and reliability of the measurement model. This finding strengthens the validity of the constructs used, ensuring that they are appropriate for evaluating the hypothesized relationships within the research.

Table 3. Path Coefficient Results

Hypothesis	Coefficient	T Statistics	P Values	Conclusion
H1: Corporate Culture -> Firm Performance	0.151	4.588	0.000***	Accepted
H2: Strategy Orientation -> Firm Performance	0.098	3.625	0.000***	Accepted

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Hypothesis	Coefficient	T Statistics	P Values	Conclusion
H3: Environmental Uncertainty -> Firm Performance	0.052	0.592	0.554	Not Accepted
H4: Corporate Culture -> Lever of Controls -> Firm Performance	0.036	1.851	0.065	Not Accepted
H5: Strategy Orientation -> Lever of Controls -> Firm Performance	0.061	1.807	0.071	Not Accepted
H6: Environmental Uncertainty -> Lever of Controls -> Firm Performance	0.016	1.156	0.248	Not Accepted
Adjusted R Square	**0.689**			

Table 3 presents the path coefficient results for testing the hypotheses outlined in this study. The findings validate Hypothesis 1, which posits that corporate culture positively influences firm performance. This is supported by a coefficient of 0.151, a T statistic of 4.588, and a P value of 0.000, indicating a significant positive effect. Similarly, Hypothesis 2, suggesting that strategic orientation positively impacts firm performance, is also confirmed, with a coefficient of 0.098, a T statistic of 3.625, and a P value of 0.000, reflecting a meaningful and positive relationship.

Conversely, Hypothesis 3, which proposes that environmental uncertainty positively influences firm performance, is not supported. The results show a coefficient of 0.052, a T statistic of 0.592, and a P value of 0.554, indicating no statistically significant effect.

Regarding the moderating effects of the Lever of Controls (LoC), none of the hypotheses are supported. Hypothesis 4, which posits that LoC moderates the relationship between corporate culture and firm performance, is rejected, with a coefficient of 0.036, a T statistic of 1.851, and a P value of 0.065. Similarly, Hypothesis 5, concerning the moderating role of LoC in the relationship between strategic orientation and firm performance, is also unsupported, as indicated by a coefficient of 0.061, a T statistic of 1.807, and a P value of 0.071. Finally, Hypothesis 6, which explores the moderating impact of LoC on the relationship between environmental uncertainty and firm performance, is not validated, with a coefficient of 0.016, a T statistic of 1.156, and a P value of 0.248, demonstrating no significant moderating effect.

The Adjusted R Square value of 0.689 indicates that the model explains 68.9% of the variance in firm performance. While this suggests that the independent and moderating variables make a substantial contribution to the model, the remaining 31.1% of the variability is attributable to external factors not examined in this study. This finding underscores the complexity of factors influencing firm performance and highlights the model's limitations in fully capturing these dynamics.

4.2. The Effect of Corporate Culture on Firm Performance

The first hypothesis (H1) evaluated whether corporate culture positively influences firm performance. The analysis yielded a coefficient of 0.151, a T statistic of 4.588 (exceeding the critical threshold of 1.96), and a P value of 0.000 (significantly below 0.01), confirming the acceptance of this hypothesis. These findings substantiate the argument that a strong corporate culture is integral to enhancing firm performance.

This result aligns with previous studies that emphasize the role of corporate culture as a critical driver of organizational success. For instance, Quinn and Cameron highlight that

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cohesive cultural frameworks, such as those fostering collaboration and innovation, directly contribute to improved performance outcomes (Quinn & Cameron, 2019). Similarly, Chatman et al. underline that organizations with well-aligned cultural practices are better positioned to adapt to market demands and achieve sustained competitive advantage (Chatman et al., 2014).

The findings underscore that firms prioritizing cultural cohesion not only enhance employee engagement and productivity but also create an environment conducive to achieving strategic objectives. This supports the view that a robust corporate culture is not merely an internal asset but a strategic tool that can significantly influence external market performance.

4.3. The Impact of Strategic Orientation on Firm Performance

The second hypothesis (H2) investigated the relationship between strategic orientation and firm performance. The analysis yielded a coefficient of 0.098, a T statistic of 3.625 (exceeding the critical threshold of 1.96), and a P value of 0.000 (well below 0.01), leading to the acceptance of this hypothesis. These results confirm that strategic orientation significantly and positively influences firm performance.

This finding is consistent with prior studies emphasizing the critical role of strategic orientation in navigating complex market dynamics. For instance, Laukkanen et al. highlighted that firms with well-defined strategic orientations are better positioned to optimize their resource allocation and align their capabilities with market demands (Laukkanen et al., 2013). Similarly, Arun and Özmutlu argue that a proactive strategic orientation enables firms to respond effectively to competitive pressures and technological advancements, fostering sustainable performance improvements (Arun & Özmutlu, 2023).

4.4. The Influence of Environmental Uncertainty on Firm Performance

The third hypothesis (H3) sought to evaluate whether environmental uncertainty positively influences firm performance. The results showed an estimated coefficient of 0.062, a T statistic of 0.592 (below the critical value of 1.96), and a P value of 0.554 (exceeding the 0.10 threshold), providing no evidence to support this hypothesis. Thus, environmental uncertainty was not found to have a positive impact on firm performance.

One explanation for this result lies in the persistent disruptions caused by the COVID-19 pandemic, which significantly altered business operations globally (Martomo et al., 2022). The pandemic introduced heightened uncertainty, compelling organizations to rapidly implement hybrid work arrangements and rely heavily on digital technologies. This unprecedented shift may have limited firms' ability to leverage environmental uncertainty as an opportunity for strategic advantage, aligning with findings by Huang et al., who observed that excessive uncertainty often leads to operational inefficiencies rather than enhanced adaptability (Huang et al., 2023).

While previous studies, such as those by Milliken, highlight the potential for environmental uncertainty to drive organizational flexibility and innovation, these benefits may only materialize when firms possess adequate resources and adaptive capabilities (Milliken, 1987). Organizations lacking these elements may struggle to convert uncertainty into actionable strategies, as noted by Akram and Siddiqui, who found that supply chain unpredictability negatively impacts performance without robust logistical and managerial systems (Akram & Siddiqui, 2019).

The anticipated positive effect of environmental uncertainty on firm performance was not substantiated, reflecting the complex and often detrimental nature of uncertainty during crises. This outcome underscores the importance of internal capabilities—such as agility, innovation,

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and effective leadership—in determining how firms respond to uncertain environments. Without these capabilities, organizations may find it challenging to adapt and thrive amidst unpredictability, particularly in the face of global disruptions like the COVID-19 pandemic.

4.5. Moderating Role of Lever of Control

This study analyzes the moderating role of the Lever of Control (LoC) framework in the relationships among corporate culture, strategic orientation, environmental uncertainty, and firm performance.

The parameter coefficient for corporate culture on firm performance, moderated by the LoC, is 0.036. While this suggests a positive impact, the p-value of 0.065 (slightly below the 0.10 threshold) leads to the acceptance of the null hypothesis (H0). This indicates that the LoC does not significantly enhance the relationship between corporate culture and firm performance. Previous studies, such as those by Simons, emphasize that belief systems within the LoC framework align employee behaviors with organizational objectives (Simons, 1995). However, this alignment may not always translate into amplified performance outcomes, particularly when cultural cohesion already exerts a strong direct influence on performance.

Similarly, for strategic orientation, the parameter coefficient is 0.061, demonstrating a positive influence on firm performance when moderated by the LoC. However, the p-value of 0.071 supports the acceptance of the null hypothesis. This finding aligns with research by Nuhu et al., which highlights that interactive controls within the LoC framework may not consistently amplify strategic effectiveness unless complemented by adaptive leadership and robust resource allocation (Nuhu et al., 2019).

The coefficient for environmental uncertainty on firm performance, moderated by the LoC, is 0.016, indicating a minimal positive impact. With a p-value of 0.248 (exceeding the 0.10 threshold), the null hypothesis is again accepted. These findings echo the conclusions of Huang et al., who observed that excessive reliance on control mechanisms in uncertain environments could hinder rather than enhance organizational responsiveness (Huang et al., 2023).

In summary, while corporate culture, strategic orientation, and environmental uncertainty positively influence firm performance, the LoC does not significantly augment these relationships. This aligns with findings by Gomez-Conde et al., who suggest that the LoC's effectiveness as a moderating framework depends heavily on organizational context and the interplay of external factors (Gomez-Conde et al., 2019).

The inability of the LoC to mediate these relationships may be attributed to several factors:

1) Strong direct relationships between the variables and firm performance diminish the incremental effect of the LoC.
2) Independent variables exert significant direct impacts on firm performance without requiring LoC mediation.
3) Robust measurement frameworks for the independent variables render additional reinforcement through the LoC unnecessary.
4) Limited diversity in the company sample restricts the evaluation of the LoC's moderating role across varied contexts.
5) The observation period may have been too brief to capture the long-term effects of LoC implementation (Endenich et al., 2023).
6) External factors, such as market volatility, may overshadow the role of the LoC in moderating these relationships.
7) Suboptimal implementation of the LoC within organizations may fail to align control systems with strategic objectives effectively.

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Consequently, these findings highlight the need for further investigation into alternative moderating mechanisms and contextual factors that may enhance the integration of control systems into organizational strategy. Future research could explore complementary frameworks or hybrid approaches that align more effectively with dynamic and uncertain business environments.

4.6. Managerial Implications

The statistical findings highlight that corporate culture and strategic orientation significantly enhance firm performance. This aligns with the conclusions of Quinn and Cameron, which emphasize the critical role of cultural cohesion in fostering organizational success (Quinn & Cameron, 2019). Organizations should prioritize strengthening corporate culture by encouraging employee engagement and fostering innovation, both of which are vital for achieving strategic objectives and improving performance. Such initiatives resonate with research by Chatman et al., who observed that strong cultural alignment directly contributes to enhanced productivity and organizational outcomes (Chatman et al., 2014).

Similarly, businesses are encouraged to adopt and maintain flexible strategic approaches to navigate market fluctuations effectively. This is supported by findings from Al-Ansaari et al., who demonstrated that adaptive strategic orientations enable firms to sustain competitiveness in dynamic environments by leveraging market trends and technological advancements (Al-Ansaari et al., 2015).

Governments and regulatory bodies can also play a vital role in fostering a conducive environment for business growth by supporting initiatives that enhance organizational culture and strategic adaptability through training programs and financial incentives. These measures align with the recommendations of Prajogo and McDermott, who emphasized the importance of external support in bolstering internal organizational capabilities (Prajogo & McDermott, 2011).

While environmental uncertainty did not show a substantial direct impact on firm performance in this study, organizations should nonetheless build the capacity to manage uncertainty effectively. As Milliken highlighted, the ability to anticipate and respond to external changes is crucial for sustaining resilience in the face of unpredictable challenges (Milliken, 1987). Developing proactive risk management frameworks and enhancing decision-making agility will be essential for firms aiming to thrive in volatile conditions.

The absence of a significant moderating effect of the Lever of Controls (LoC) on the studied relationships suggests that traditional management control systems may not always align with the demands of rapidly evolving environments. This finding supports the observations of Gomez-Conde et al., who argued that the effectiveness of control systems is context-dependent and may require reconfiguration in high-uncertainty scenarios (Gomez-Conde et al., 2019). Organizations should explore alternative or more adaptive management control systems, such as interactive controls, that better align with external volatility while maintaining operational efficiency.

Fostering a robust corporate culture, adopting adaptable strategic approaches, and exploring innovative management control systems are pivotal for achieving sustainable business performance. These strategies will enable organizations to maintain agility, capitalize on opportunities, and navigate the complexities of dynamic business environments effectively.

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4.7. Theoretical Contributions

This research makes significant theoretical contributions by reaffirming the pivotal roles of corporate culture and strategic orientation as key determinants of business success. These findings align with established strategic management theories, such as those proposed by previous studies, which emphasize the importance of cultural cohesion and strategic alignment in enhancing organizational performance (Chatman et al., 2014; Quinn & Cameron, 2019). The study corroborates the idea that a strong corporate culture fosters collaboration, innovation, and productivity, while strategic orientation equips organizations to adapt effectively to market dynamics, reinforcing their competitive advantage (Al-Ansaari et al., 2015).

However, the findings diverge from prior studies by demonstrating that environmental uncertainty does not substantially influence firm performance (Akram & Siddiqui, 2019; Milliken, 1987). This challenges the traditional notion that ambiguity and uncertainty can drive flexibility and performance improvements, suggesting that uncertainty may instead impose constraints that hinder decision-making and operational efficiency during global crises, such as the COVID-19 pandemic.

Additionally, the study highlights the limitations of the Lever of Controls (LoC) framework in moderating the relationships between cultural, strategic, and environmental factors and firm performance. This observation addresses a critical theoretical gap identified in previous research, which noted the context-dependent efficacy of management control systems (Gomez-Conde et al., 2019; Nuhu et al., 2019). The findings suggest that the LoC framework, while valuable in some scenarios, may require reassessment or enhancement to remain effective in dynamic and unpredictable business environments.

This research advances the theoretical discourse by proposing that conventional management control systems may need to be augmented with more adaptive and flexible strategies. Such adaptations could better support organizations in sustaining long-term success amidst rapid environmental changes, echoing the recommendations of Liu et al. (2023) regarding the importance of evolving management frameworks to address contemporary challenges.

4.8. Limitations

This study is based on data collected through surveys, and several limitations were identified: (1) the lack of enhancement in the relationships between corporate culture, strategic orientation, and environmental uncertainty with firm performance; and (2) the inability of environmental uncertainty to positively influence firm performance, .likely due to the effects of the COVID-19 pandemic, which necessitated hybrid work arrangements under government-mandated Large-Scale Social Restrictions (*Pembatasan Sosial Berskala Besar* or PSBB) in Indonesia.

Despite these limitations, the findings provide substantial theoretical implications by underscoring the importance of corporate culture in driving firm performance. A well-cultivated corporate culture is essential for fostering employee engagement, promoting creativity, and ensuring alignment with organizational strategies—key factors for achieving commercial success. The study further emphasizes the role of strategic orientation as a critical tool for problem-solving, skill enhancement, and overall performance improvement. Firms that effectively leverage strategic orientation are better equipped to address challenges and seize opportunities in rapidly changing environments.

The results also highlight the need for organizations to develop a comprehensive understanding of environmental uncertainty and its implications. Proactively managing uncertainty enables firms to make informed decisions and navigate market fluctuations more

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effectively, ultimately enhancing performance. By integrating corporate culture, strategic orientation, and environmental uncertainty management, organizations can implement a unified strategy that significantly improves overall business performance.

This research provides valuable insights for business practitioners, demonstrating that the interplay of corporate culture, strategic direction, and environmental uncertainty management substantially influences firm performance. Organizations that prioritize these factors are likely to experience notable improvements in operational efficiency, innovation, and competitive advantage.

5. Conclusion

This study provides valuable insights into the hypotheses regarding the relationships among corporate culture, strategic orientation, environmental uncertainty, and firm performance, as well as the moderating role of the Lever of Controls (LoC).

The findings confirm the first hypothesis, which proposed that corporate culture positively influences firm performance. This highlights the critical role of a strong and cohesive corporate culture in driving organizational success, as improvements in culture are directly associated with superior business performance.

The second hypothesis, asserting that strategic orientation positively impacts firm performance, was also supported. Organizations with flexible and proactive strategic orientations, particularly those capable of adapting to market and technological shifts, demonstrated improved performance. This underscores the importance of a strategy that prioritizes adaptability and competitiveness in responding to external changes.

However, the third hypothesis, which suggested that environmental uncertainty positively influences firm performance, was not supported. The adverse effects of uncertainty, exacerbated by the COVID-19 pandemic, outweighed any potential benefits, leading to diminished performance. This suggests that heightened levels of uncertainty can create challenges that surpass opportunities, particularly for organizations unprepared to navigate such conditions.

The fourth hypothesis, proposing that the LoC moderates the relationship between corporate culture and firm performance, was not substantiated. Contrary to expectations, the LoC did not enhance this relationship, indicating that other factors may play a more significant role in translating corporate culture into performance outcomes.

Similarly, the fifth hypothesis, which posited that the LoC moderates the relationship between strategic orientation and firm performance, was not supported. While strategic orientation positively influences performance, the presence of control mechanisms did not significantly amplify this effect.

The sixth hypothesis, asserting that the LoC moderates the relationship between environmental uncertainty and firm performance, was also not substantiated. The LoC was unable to mitigate the negative effects of environmental uncertainty, highlighting the difficulties organizations face in managing unpredictable external factors.

In summary, while corporate culture and strategic orientation positively influence firm performance, the moderating role of the LoC was not validated in this study. These findings suggest that the influence of management control systems on performance enhancement is more complex than anticipated and requires further investigation, particularly in environments characterized by high levels of uncertainty.

Future research should explore the relationship between environmental uncertainty and firm performance across a broader spectrum of organizations, encompassing both public and

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private sectors. This approach will allow for a more comprehensive understanding of how environmental uncertainty affects performance in various contexts, including differences based on geography, industry, and organizational size. Such studies could identify trends and disparities influenced by these factors, offering valuable insights into the broader implications of environmental uncertainty.

Additionally, subsequent research should investigate the role of mediating or moderating variables that could impact the relationships among corporate culture, strategic orientation, environmental uncertainty, and firm performance. Factors such as employee motivation, compensation systems, leadership styles, and other internal organizational dynamics may significantly influence how firms respond to uncertainty and execute their strategic objectives. By examining these variables, researchers can gain deeper insights into the intricacies of these relationships and develop more targeted recommendations for improving corporate performance in unpredictable environments.

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