

**THE EFFECT OF LEADERSHIP AGILITY ON COMPANY
PERFORMANCE THROUGH STRATEGIC AGILITY AND
ORGANIZATIONAL AGILITY:
A STUDY AT PT XYZ**



THESIS

By

Khaidir Said

24222006

Thesis Supervisor:

Sidrotun Naim, M.P.A., Ph.D

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A STUDY AT PT XYZ**

Prepared by:

Khaidir Said (24222006)

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Submitted in a partial fulfillment of the requirements for the degree of Master of
Business Administration

CERTIFICATE OF APPROVAL

Name & Student ID : Khaidir Said (24222006)

Topic : The Effect of Leadership Agility on Company Performance through Strategic Agility and Organizational Agility: A Study at PT XYZ.

We hereby declare that this Thesis is from the student's own work, has been read and presented to Institute IPMI Board of Examiners, and has been accepted as part of the requirements needed to obtain a Master of Business Administration Degree and has been found to be satisfactory.

Jakarta, October 3, 2026

Examined by,



Sidrotun Naim, M.P.A.,
Ph.D

Supervisor



Dr. Liza Agustina
Maureen Nelloh, SE,
MM, CDM

Chair of Examiners



Prof. Dr. Christina Whidya
Utami, MM, CLC, CPM (A)

Examiner

Acknowledged by,



Prof. Dr. Christina Whidya Utami, MM, CLC, CPM (A)
Vice Rector of Academic and Student Affairs

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This Thesis is a presentation of my own original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

Also, this work is being submitted in partial fulfillment of the requirements for the Master of Business Administration degree and has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Jakarta, 03 October 2026



Khaidir Said

TABLE OF CONTENTS

Description	Page
Certificate of Approval	i
Non-Plagiarism Declaration	ii
Table of Contents	iii
List of Figures	vi
List of Tables	vii
Acknowledgement	viii
Abstract	ix
CHAPTER I INTRODUCTION	1
1.1 Research Background	1
1.2 Research Gap & Novelty	4
1.3 Problem Identification	7
1.4 Research Question	8
1.5 Research Objective	9
1.6 Scope of The Study	9
1.7 Significant of The Study	10
1.8 Thesis Structure	11
CHAPTER II LITERATURE REVIEW	13
2.1 Introduction	13
2.2 Leadership Agility	13
2.3 Strategic Agility	15
2.4 Organizational Agility	16
2.5 Company Performance	17
2.6 Hypothesis Development	19
2.7 Research Framework	22
CHAPTER III RESEARCH METHODS	24
3.1 Introduction	24
3.2 Research Approach	24
3.3 Research Strategy	25
3.4 Research Design	25

Description	Page
3.5 Type and Source of Data	26
3.6 Data Collection Method	26
3.7 Population and Sample	27
3.8 Operationalization of Variables	30
3.9 Measurement and Scaling	32
3.10 Reliability and Validity of the Instrument	32
3.11 Data Analysis Method	33
3.12 Model Evaluation	34
3.13 Hypothesis Testing	36
3.14 Ethical Considerations	36
CHAPTER IV FINDINGS, ANALYSIS AND DISCUSSION	38
4.1 Introduction	38
4.2 Respondent Profile	38
4.3 Descriptive Statistics of Research Variables	42
4.4 Measurement Model Evaluation	48
4.5 Structural Model Evaluation	52
4.6 Hypothesis Testing Results	58
4.7 Discussion	63
4.8 Integrative Interpretation of the Research Model	72
CHAPTER V CONCLUSIONS AND RECOMMENDATIONS	75
5.1 Conclusions	75
5.2 Theoretical Implications	76
5.3 Managerial/Practical Implications	78
5.3.1 Managerial Priority 1: Develop Leadership as a Capability Builder	79
5.3.2 Managerial Priority 2: Institutionalize Strategic Agility	79
5.3.3 Managerial Priority 3: Strengthen Organizational Execution Agility	80
5.3.4 Managerial Priority 4: Manage the Leadership to Performance Chain as a System	80
5.3.5 Suggested Managerial Implementation Roadmap	82
5.3.6 Suggested Monitoring Indicators	84
5.4 Limitations	86

Description	Page
5.4.1 Single-Firm and Context Specific Design	86
5.4.2 Cross-Sectional Timing and Causal Interpretation	86
5.4.3 Perceptual Measures and Common Method Considerations	87
5.4.4 Model Parsimony and Omitted Determinants	88
5.4.5 Measurement Model Refinement	88
5.5 Recommendations for Future Research	89
5.5.1 Extend the Mediation Architecture	89
5.5.2 Use Longitudinal and Multi Source Designs	90
5.5.3 Replicate Across Organizations and Employee Groups	90
5.5.4 Refine Measurement and Add Selected Explanatory Variables	91
5.6 Overall Chapter Synthesis and Closing Interpretation	92
5.6.1 Synthesis of the Research Answers	93
5.6.2 Synthesis of Theoretical and Practical Contributions	94
5.6.3 Boundary of the Final Conclusions	95
REFERENCES	97

LIST OF FIGURES

Description	Page
Figure 1.1 Growth and Global Dominance of Indonesia's Nickel Mining Industry	2
Figure 2.1 Research Framework	23
Figure 4.1 Respondent Distribution by Department (N = 207)	42
Figure 4.2 Mean Scores of Research Constructs (Final-Model Indicators)	44
Figure 4.3 Ranking of Measurement Item Means (N = 207)	47
Figure 4.4 Initial Measurement Model (Model 1)	48
Figure 4.5 Final Measurement Model after Indicator Purification (Model 2)	49
Figure 4.6 Final Structural Model with Path Coefficients and R ²	54
Figure 4.7 Bootstrapping Results: Path Significance (P-Values)	59
Figure 4.8 Relative Strength of Direct Path Coefficients	60
Figure 4.9 Decomposition of Leadership Agility Total Effect on Company Performance	62
Figure 4.10 Integrated Interpretation of the Research Model	74
Figure 5.1 Theoretical Contribution of the Study	78
Figure 5.2 PT XYZ Leadership to Performance Agility Framework	81

LIST OF TABLES

Description	Page
Table 1.1 List of Previous Related Research	5
Table 3.1 Type and Source of Data	26
Table 3.2 Sample Size Adequacy Benchmarks	30
Table 3.3 Operationalization of Variables	30
Table 3.4 Cronbach Alpha Criteria	33
Table 3.5 Summary of Model Evaluation Criteria	35
Table 4.1 Respondent Profile (N = 207)	38
Table 4.2 Descriptive Statistics of Measurement Items (N = 207)	42
Table 4.3 Construct Level Descriptive Statistics (Final-Model Indicators)	45
Table 4.4 Initial vs Final Measurement Model Comparison	50
Table 4.5 Outer Loadings and Average Variance Extracted - Final Model	50
Table 4.6 Construct Reliability - Final Model	51
Table 4.7 Heterotrait Monotrait Ratio (HTMT)	51
Table 4.8 Collinearity Statistics (VIF)	52
Table 4.9 Coefficient of Determination (R^2)	53
Table 4.10 Effect Size (f^2)	55
Table 4.11 Predictive Relevance (Q^2) and PLSpredict Results	56
Table 4.12 Integrated Structural Model Assessment	57
Table 4.13 Hypothesis Testing Results - Direct Effects	58
Table 4.14 Hypothesis Testing Results - Mediation (Specific Indirect Effects)	61
Table 4.15 Decomposition of Leadership Agility Effects on Company Performance	61
Table 4.16 Summary of All Hypothesis Testing Results	63
Table 4.17 Integrated Research Findings	72
Table 5.1 Managerial Action Priority Matrix	82
Table 5.2 Suggested 12-Month Managerial Implementation Roadmap	83
Table 5.3 Suggested Agility Monitoring Indicators for PT XYZ	84
Table 5.4 Research Limitations and Implications	89
Table 5.5 Proposed Future Research Agenda	92
Table 5.6 Final Synthesis of Research Findings and Contributions	96

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ABSTRACT

This study examines the effect of Leadership Agility on Company Performance through the parallel mediation of Strategic Agility and Organizational Agility within PT XYZ, a nickel mining subsidiary operating in East Halmahera, North Maluku. Indonesia's nickel sector has faced sharp swings in production quotas, royalties, and regulatory requirements, conditions under which leadership capability is theorized to matter most. The research addresses two literature gaps: contradictory findings on the Leadership Agility - Organizational Agility relationship within Indonesia's public sector, and the absence of formal mediation testing within an extractive industry setting. Using a quantitative, deductive, cross-sectional design, primary data were collected via a structured five point Likert questionnaire from 207 valid respondents (drawn from a population of 225 tenure eligible employees) and analyzed using PLS-SEM (SmartPLS 4.1) with bootstrapping. All seven hypotheses were supported: Leadership Agility significantly shaped both Strategic Agility and Organizational Agility, which together with a smaller direct effect drove Company Performance; both mediation pathways were also significant, indicating complementary partial mediation. These findings confirm that leadership agility drives company performance both directly and by building strategic and organizational capabilities, resolving contradictory evidence on the Leadership Agility - Organizational Agility link and extending mediation testing into a high-volatility mining context. The results offer PT XYZ's management an evidence-based basis for prioritizing leadership development alongside organizational-system investment, with broader relevance across Indonesia's nickel mining sector.

Keywords: Leadership Agility, Strategic Agility, Organizational Agility, Company Performance, PLS-SEM, Indonesian nickel mining

CHAPTER I

INTRODUCTION

1.1. Research Background

Indonesia has positioned itself as the epicenter of the global nickel industry over the past decade. This dominance accelerated sharply after the 2020 ban on unprocessed nickel ore exports, a policy aimed at increasing domestic value from mineral wealth and attracting smelting investment (Rahmaditio, Wang, Purba, & Zuhaira, 2026).

By 2024 the country produced nearly two-thirds of global raw nickel, exceeding the combined output of all other producers. Nickel in mine production rose from 853,000 tonnes in 2019 to 2.2 million tonnes in 2024, an increase of 158% over five years (Peh, as cited in Mine Magazine, 2025; Rahmaditio et al., 2026).

This dominance, however, sits on increasingly volatile ground. Indonesia raised royalties in 2025 after nickel prices plunged to a near five-year low, and the government confirmed plans to cut production in 2026 to support prices and curb environmentally harmful operations (Donato, as cited in S&P Global, 2025).

National production quotas surged from around 66 million tons in 2021 to nearly 299 million tons in 2025. At the same time, the government shifted from three-year to one-year permits, imposed a moratorium on new intermediate smelter licenses, and suspended 190 mining permits nationwide (Setiabudi, 2025; Donato, as cited in S&P Global, 2025).

Compounding this, nickel production accounted for 22% of Indonesia's industrial emissions in 2023, accelerating pressure toward a formal decarbonization roadmap. Global oversupply is also projected to persist through 2026, further compressing producer margins (Rahmaditio et al., 2026; ING Think, 2025).

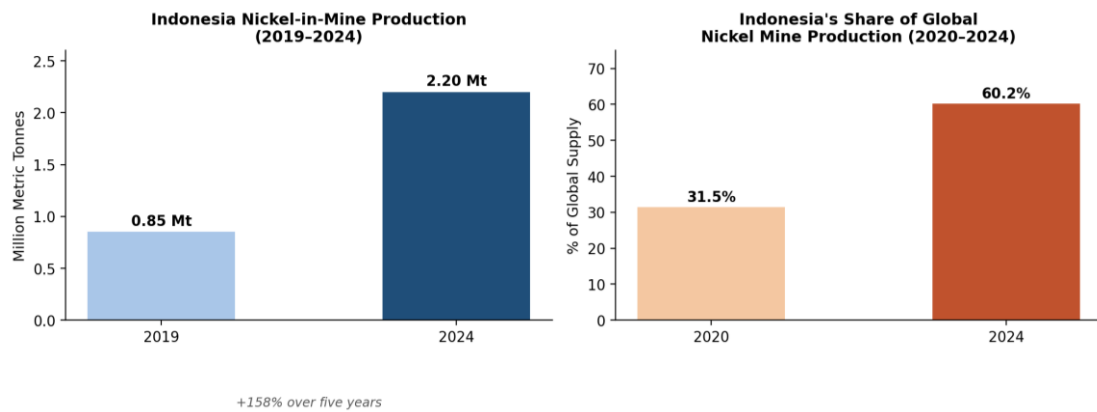


Figure 1.1 Growth and Global Dominance of Indonesia's Nickel Mining Industry

Source: Peh, as cited in Mine Magazine (2025); Donato, as cited in S&P Global (2025); Rahmaditio et al. (2026)

This combination of price volatility, shifting regulatory regimes, and tightening environmental scrutiny places Indonesian nickel mining firms squarely within what management scholars describe as a VUCA, volatile, uncertain, complex, and ambiguous, business environment (de Diego Ruiz & Almodóvar, 2026).

This national volatility is not an abstract macroeconomic backdrop; it is directly experienced by individual operating companies, including PT XYZ, the locus of this study. PT XYZ was established in 2012 as a subsidiary of a state owned parent company, initially operating as a heavy equipment provider, survey service company, and mining contractor rather than a mine operator in its own right.

In September 2022, PT XYZ formally transitioned into a nickel ore mining company following the transfer of a Mining Business License (Izin Usaha Pertambangan, IUP), and now holds production operation rights over a 20,763 hectare concession in East Halmahera Regency, North Maluku Province, approximately 200 kilometers east of the provincial capital, Sofifi. The company applies an open pit mining system using a sequential extraction and reclamation method intended to minimize the extent of simultaneously exposed land.

As part of Indonesia's National Strategic Project agenda, PT XYZ is positioned to support the construction of an integrated nickel processing and

refining facility linked to the national electric-vehicle battery ecosystem. This downstream ambition places the company at the center of the same national volatility described above: it must scale production and processing capacity while simultaneously navigating shifting royalty structures, quota regimes, and environmental compliance requirements.

This tension is not merely theoretical. In December 2025, the environmental advocacy network Jaringan Advokasi Tambang (JATAM) publicly raised concerns regarding the environmental impact assessment (AMDAL) process associated with PT XYZ's planned production capacity increase, citing incomplete public disclosure of coastal water quality data, active mining maps, and technical mining plans, as well as unresolved community consultation input from residents of Halmahera Timur (JATAM, as cited in Dunia Energi, 2025).

Regardless of how this specific process is ultimately resolved, it illustrates a broader operating reality for PT XYZ: the company must respond simultaneously to regulatory volatility, market pressure, and heightened social environmental scrutiny, precisely the conditions under which organizational agility scholarship suggests leadership capability becomes most consequential (Joiner, 2019).

How firms navigate this kind of turbulence is something agility scholarship explains fairly coherently. Developing organizational agility suited to turbulent conditions, Joiner (2019) argues, requires executives to focus on three interrelated areas, strategic agility, organizational agility, and leadership agility, with leadership agility playing the central, originating role.

Joiner and Josephs (2007) break leadership agility down, at the individual level, into four interrelated competencies: context-setting agility (reading complex, changing situations accurately before deciding how to act), stakeholder agility (engaging constructively with a wide range of internal and external stakeholders), creative agility (generating innovative responses to unfamiliar problems), and self-leadership agility (the ongoing willingness to reflect on and adapt one's own approach). A firm like PT XYZ, which has to manage regulators, communities, and

internal operations all at once amid shifting national policy, is a natural fit for all four.

Strategic agility, per Doz and Kosonen (2008, 2010), is an organization's ability to regularly adapt to uncertain environments through three meta-capabilities, strategic sensitivity, resource fluidity, and leadership unity. Asghar, Kanbach, and Kraus (2025) define organizational agility in a similar spirit: the ability to adapt to rapidly changing environments and reconfigure structure and operations, framed as a bundle of interrelated dynamic capabilities.

This leadership-to-performance chain has empirical backing. Studying 203 respondents in Jakarta's restaurant industry via PLS-SEM, Gulo, Purwoko, and Zulkifli (2025) found that leadership agility and organizational agility significantly mediate the effect of organizational factors on company performance.

de Diego Ruiz and Almodóvar (2026) reached a similar conclusion analyzing 173 Spanish multinational enterprises, finding that environmental turbulence significantly shapes strategic agility's core components. For PT XYZ, operating in Indonesia's high-volatility nickel mining sector and under active public scrutiny of its expansion plans, understanding how leadership agility translates into strategic and organizational agility, and ultimately into company performance, is not an abstract academic question. It is an operational necessity.

1.2. Research Gap & Novelty

Several studies have tested relationships between the exact constructs used here, Leadership Agility, Strategic Agility, Organizational Agility, and Company Performance, yet their findings do not agree, particularly on the Leadership Agility-Organizational Agility relationship.

In Jakarta's restaurant industry, Gulo, Purwoko, and Zulkifli (2025) surveyed 203 respondents via PLS-SEM and found a positive relationship between leadership agility and organizational agility, with both significantly affecting company performance. Within Indonesia's public sector, though, the findings diverge sharply.

At the Directorate General of Population and Civil Registration (Ditjen Dukcapil) under the Ministry of Home Affairs, Hat, Sunarto, and Nenobais (2025) found leadership agility significantly affects organizational agility. Meilina (2024) found the opposite studying Jambi City's Regional Tax and Retribution Management Agency (BPPRD) via PLS: leadership agility had no significant direct effect on organizational agility there, influencing it only indirectly through organizational culture as a mediator.

The Strategic Agility-Performance literature shows a parallel inconsistency. Tripathy and Lenka's (2024) systematic review confirmed that strategic agility positively impacts organizational performance, but found the relationship heavily contingent on external environmental turbulence and internal cultural traits, and they were explicit that persistent inconsistencies run across studies due to divergent methodologies.

de Diego Ruiz and Almodóvar (2026) add to this picture: strategic agility's core components, strategic sensitivity, leadership unity, and resource fluidity, respond differently depending on the type of environmental turbulence a firm faces, reinforcing just how context-dependent strategic agility's antecedents and effects really are. Table 1.1 summarizes these studies.

Table 1.1 List of Previous Related Research

No.	Author & Title of Research	Variable of Interest	Findings
1	Gulo, Purwoko, & Zulkifli (2025). Mediating Role of Leadership Agility and Organizational Agility to Maintain Sustainable Highest Performance	Leadership Agility, Organizational Agility, Company Performance	LA positively affects OA; both LA and OA significantly affect Company Performance
2	Hat, Sunarto, & Nenobais (2025). Pengaruh Kepemimpinan Agilitas terhadap Agilitas Organisasi melalui Budaya Organisasi	Leadership Agility, Organizational Agility	LA significantly and directly affects OA

No.	Author & Title of Research	Variable of Interest	Findings
3	Meilina (2024). Pengaruh Kepemimpinan Agilitas terhadap Agilitas Organisasi BPPRD Kota Jambi melalui Budaya Organisasi	Leadership Agility, Organizational Agility	LA has no significant direct effect on OA; effect exists only indirectly through organizational culture
4	Tripathy & Lenka (2024). Strategic Agility and Organizational Performance: The Role of Environmental Turbulence and Organizational Culture	Strategic Agility, Company Performance	SA positively affects performance, but the relationship is inconsistent across studies and highly moderated by context
5	de Diego Ruiz & Almodóvar (2026). Strategic Agility in MNEs: Navigating the Environmental Turbulence Caused by New Competitors, Innovations, and Regulations	Strategic Agility (Strategic Sensitivity, Leadership Unity, Resource Fluidity)	SA's components respond differently depending on the turbulence source, showing context-dependent effects

Two concrete gaps emerge from this body of evidence, and this study addresses both. First, the Leadership Agility-Organizational Agility relationship produces directly contradictory findings even within similar Indonesian public-sector contexts (Hat et al., 2025 vs. Meilina, 2024), suggesting the relationship may be sector-dependent, and one that has never been tested within an extractive or mining industry setting.

Second, Gulo, Purwoko, and Zulkifli (2025) and Restiani, Boyas, Pujianto, and Violita (2025) have each formally tested leadership agility's mediated effect on performance, within the restaurant and MSME sectors, respectively, but no identified study has extended that same mediation-testing approach to a high-volatility, single-firm mining context. Addressing both gaps, this study tests the full parallel-mediation structure in which Leadership Agility is influencing Company Performance both through Strategic Agility and through Organizational Agility as

parallel mediators, including formal tests of whether Strategic Agility and Organizational Agility each mediate the effect of Leadership Agility on Company Performance, through the specific hypotheses developed in Chapter II, within PT XYZ, a nickel mining firm operating under Indonesia's high regulatory volatility.

1.3. Problem Identification

PT XYZ operates in an industry where regulatory quotas, royalty structures, and environmental requirements can shift within a single fiscal year (Setiabudi, 2025; Donato, as cited in S&P Global, 2025). Leadership within such firms is expected to sense change quickly and translate that sensing into coordinated strategic and operational responses (Joiner, 2019).

This expectation is not hypothetical for PT XYZ specifically: the company's own production-capacity expansion plan became the subject of public environmental scrutiny in late 2025 (JATAM, as cited in Dunia Energi, 2025), illustrating precisely the kind of complex, fast-moving, multi-stakeholder pressure that leadership agility theory suggests requires rapid, coordinated organizational response (Joiner & Josephs, 2007).

However, the empirical literature offers no consistent answer as to whether leadership agility actually translates into organizational agility. Findings from Indonesia's own public sector directly contradict one another: Hat, Sunarto, and Nenobais (2025) found leadership agility significantly and directly shapes organizational agility, while Meilina (2024), studying a comparable government agency, found no significant direct effect at all.

Similarly, Tripathy and Lenka (2024) note that the strategic agility - performance relationship is inconsistent across studies and highly dependent on contextual factors such as environmental turbulence, precisely the condition PT XYZ faces given Indonesia's volatile nickel regulatory environment.

1.3.1. Problem Statement

Despite the theoretical expectation that leadership agility drives organizational responsiveness (Joiner, 2019), the empirical literature offers no

consistent evidence on how this actually occurs. Findings on how Leadership Agility is influencing Organizational Agility directly contradict one another even within similar Indonesian public-sector settings (Hat, Sunarto, & Nenobais, 2025 vs. Meilina, 2024), and the effect of Strategic Agility on Company Performance is similarly reported as inconsistent and highly context-dependent (Tripathy & Lenka, 2024). Critically, none of these relationships have previously been tested within an extractive or mining industry setting.

1.3.2. Problem Solution

For PT XYZ a firm operating under Indonesia's high-volatility nickel regulatory environment and active public scrutiny of its expansion plans, this gap translates into a concrete operational uncertainty: it remains unclear whether leadership agility meaningfully drives company performance, and if so, whether that effect operates through strategic agility, through organizational agility, through both, or directly. This study investigates that mechanism through the set of hypotheses developed in Chapter II, tested within PT XYZ as a single firm, high volatility mining context.

1.4. Research Questions

Based on the background and problem identification above, this research seeks to answer the following:

1. How does Leadership Agility affect Strategic Agility at PT XYZ?
2. How does Leadership Agility affect Organizational Agility at PT XYZ?
3. How does Strategic Agility affect Company Performance at PT XYZ?
4. How does Organizational Agility affect Company Performance at PT XYZ?
5. How does Leadership Agility affect Company Performance at PT XYZ?
6. Does Strategic Agility mediate the effect of Leadership Agility on Company Performance at PT XYZ?
7. Does Organizational Agility mediate the effect of Leadership Agility on Company Performance at PT XYZ?

1.5. Research Objective

The objective of this research is to understand the impact and relationships between the following factors:

1. To evaluate the effect of Leadership Agility on Strategic Agility.
2. To evaluate the effect of Leadership Agility on Organizational Agility.
3. To analyze the effect of Strategic Agility on Company Performance.
4. To analyze the effect of Organizational Agility on Company Performance.
5. To analyze the effect of Leadership Agility on Company Performance.
6. To examine the mediating role of Strategic Agility in the relationship between Leadership Agility and Company Performance.
7. To examine the mediating role of Organizational Agility in the relationship between Leadership Agility and Company Performance.

1.6. Scope of The Study

This study focuses on employees of PT XYZ who are directly involved in or exposed to leadership and strategic decision-making processes, examining how leadership agility shapes strategic and organizational agility, and how these constructs in turn shape company performance, within the specific context of Indonesia's nickel mining industry (Rahmaditio et al., 2026; Setiabudi, 2025).

The study population consists of PT XYZ's permanent and contract employees, with at least one year of tenure at the time of data collection. This criteria, to ensure respondents had sufficient exposure to the company's leadership and operating practices.

This eligible population totaled 225 employees, all of whom were included as respondents through a total population sampling technique (see Chapter III, Section 3.7). Data collection was conducted at a single point in time using a cross sectional design, reflecting employees' perceptions of leadership, strategic, and organizational agility, and company performance as of the survey period.

This study adopts a single firm design centered on PT XYZ rather than a multi-company sample. A single-organization design is appropriate when a study aims to examine a set of relationships in depth within a bounded, real world context that shares a common set of external pressures, in this case, a single regulatory regime, a single production cycle, and a shared set of leadership structures (Yin, 2018).

This design trades broader cross-firm generalizability for contextual depth, allowing the relationships between Leadership Agility, Strategic Agility, Organizational Agility, and Company Performance to be examined without the confounding effect of firm level differences in ownership structure, mining license type, or regional regulatory jurisdiction that would arise in a multi company sample.

1.7. Significant of The Study

The findings of this research will contribute to:

1.7.1. Theoretical Contribution

This study extends the agility literature in two concrete ways. First, it contributes to resolving the contradictory empirical findings on the Leadership Agility - Organizational Agility relationship identified in Indonesia's public sector literature, where Hat, Sunarto, and Nenobais (2025) found a significant direct effect while Meilina (2024) found none, by testing this relationship within an extractive-industry setting that has not previously been examined.

Second, while Gulo, Purwoko, and Zulkifli (2025) and Restiani, Boyas, Pujianto, and Violita (2025) have each formally tested leadership agility's mediated effect on performance as explicit hypotheses within the restaurant and MSME sectors respectively, this study extends that same mediation testing approach to a high-volatility, single firm mining context, adding sector specific evidence to a body of research still dominated by service, retail, and small enterprise settings.

1.7.2. Practical Contribution

For PT XYZ's management, this study offers an evidence-based understanding of which specific agility capability, leadership, strategic, or

organizational, most strongly drives company performance under Indonesia's volatile nickel regulatory environment (Donato, as cited in S&P Global, 2025; Setiabudi, 2025), enabling more targeted decisions on leadership development programs, strategic planning processes, and organizational design.

More broadly, the findings may also be of practical value to human resource and organizational development practitioners across Indonesia's wider nickel mining sector, who face similar exposure to regulatory volatility, price fluctuation, and shifting environmental requirements (Rahmaditio et al., 2026). Insight into which agility pathway most directly translates leadership capability into company performance can inform how extractive industry firms more broadly prioritize investment between leadership training and organizational-system redesign.

1.8. Thesis Structure

This thesis consists of five chapters, structured as follows:

Chapter I: Introduction

Covers the research background, problem identification, research questions, objectives, scope, and significance.

Chapter II: Literature Review

Presents the theoretical foundations of Leadership Agility, Strategic Agility, Organizational Agility, and Company Performance, followed by hypothesis development and the research framework.

Chapter III: Research Methods

Specifies the research approach, design, population and sampling method, data collection, operationalization of variables, and the reliability/validity testing procedure.

Chapter IV: Data Analysis

Presents the results of data processing, measurement and structural model evaluation, and hypothesis testing using PLS-SEM (SmartPLS 4.1).

Chapter V: Conclusion and Recommendations

Summarizes findings, theoretical and practical contributions, limitations, and recommendations for future research.

CHAPTER II

LITERATURE REVIEW

2.1. Introduction

Four constructs run through this research, Leadership Agility, Strategic Agility, Organizational Agility, and Company Performance, and the theoretical ground beneath each of them is worked through in the pages that follow.

None of the definitions used here are improvised. Each one is anchored to two kinds of sources: the work that first introduced the concept, and the literature most widely recognized as authoritative on it, a pairing meant to keep the definitions rigorous from the ground up.

Each construct is then unpacked in enough depth to make its underlying logic clear, which sets up the conceptual groundwork the measurement approach in Chapter III relies on. Once that groundwork is in place, the chapter turns to two remaining tasks: developing seven research hypotheses, and laying out the overall framework that guides how the study is carried out.

2.2. Leadership Agility

Joiner and Josephs (2007) define leadership agility as a leader's ability to make wise, effective decisions amid complex and constantly shifting conditions. They arrived at the concept through extensive research into how leaders develop across five stages, Expert, Achiever, Catalyst, Co-Creator, and Synergist, each one marking a growing capacity to step back from a situation, view it from multiple angles, and shape a response together with others, moving away from a fixed, expert-driven approach toward one that is fluid and attuned to context.

At the Expert and Achiever stages, leaders tend to lean on established expertise and fixed goals. That reliance loosens at the Catalyst, Co-Creator, and Synergist stages, where the capacity to see a situation from several angles and craft responses together with others starts to grow (Joiner & Josephs, 2007). What this progression implies is that leadership agility is not something a person simply has or lacks, it is a capability an organization can deliberately build.

Joiner and Josephs (2007) break the concept down into four interrelated competencies. Context-setting agility is the capacity to read a complex, shifting situation and settle on the right approach before acting, rather than defaulting to habit. Stakeholder agility, the second, is the ability to engage a wide range of stakeholders constructively and with genuine empathy.

Creative agility, the third, is the capacity to generate innovative, sometimes unconventional, responses to unfamiliar or ill-structured problems, often by reframing the problem itself rather than reaching for a ready-made fix. Self-leadership agility, the fourth, is the ongoing willingness to reflect on one's own leadership behavior, take in honest feedback, and build new capacities over time (Joiner & Josephs, 2007). Together, the four pair reflection with action, stepping back to understand a situation while still being able to act within it.

Joiner (2019) takes this individual-level view further, arguing that leadership agility is not just a personal trait but the originating capability from which organizational agility is built. Executives aiming to develop organizational agility under turbulent conditions, he contends, need to give leadership agility the same weight as strategic and operational agility.

Leaders who sense change quickly and adjust their own thinking are the ones positioned to mobilize the strategic and structural responses an organization needs (Joiner, 2019), which is precisely why leadership agility functions as a precondition for broader organizational agility, not merely a parallel factor.

The empirical record is less tidy than the theory, however. In Jakarta's restaurant industry, Gulo, Purwoko, and Zulkifli (2025) found a significant positive relationship between leadership agility and organizational agility.

Hat, Sunarto, and Nenobais (2025) confirmed a similar direct effect within an Indonesian government agency, yet Meilina (2024), studying a comparable public-sector organization, found no significant direct relationship between the two constructs at all.

That contradiction points to sector or cultural factors not yet well understood, and is reason enough to test the relationship again within PT XYZ's extractive-industry setting.

2.3. Strategic Agility

Doz and Kosonen (2008, 2010) define strategic agility as an organization's ability to continuously adjust its strategic direction in response to a changing, uncertain external environment. Their research across companies such as Nokia, HP, SAP, and Kone identified three meta-capabilities behind it: strategic sensitivity, resource fluidity, and leadership unity.

Strategic sensitivity is the sharpness of perception and attention an organization directs toward strategic developments as they unfold, letting threats and opportunities be spotted before competitors notice them. It depends, Doz and Kosonen (2010) note, on an open strategy process and candid dialogue among senior managers, not a planning exercise confined to one team, once a year.

Resource fluidity, the second meta-capability, is the ability to reconfigure capabilities and redeploy resources rapidly toward emerging opportunities instead of leaving them locked inside rigid business units, made possible by flexible, modular structures that let knowledge, capital, and people move across internal boundaries as priorities shift (Doz & Kosonen, 2010). Leadership unity, the third, is the top management team's ability to make bold, fast, collectively owned decisions.

That unity, Doz and Kosonen (2010) explain, rests on genuine interdependency among executives, with the chief executive acting more as a process architect than a director issuing orders. Taken together, the three meta-capabilities are what separate strategic agility from ordinary strategic planning: it is fundamentally about sensing and responding, not simply about drawing up a plan.

The link to organizational performance is less settled, though. Tripathy and Lenka (2024), in a systematic review, confirmed that strategic agility positively influences performance overall, but found the effect heavily conditioned by

environmental turbulence and organizational culture, and they were explicit that inconsistencies persist across studies due to differing methods and industry contexts.

de Diego Ruiz and Almodóvar (2026) reached a similar conclusion analyzing 173 Spanish multinational enterprises: the three meta-capabilities respond differently depending on whether the turbulence comes from new competitors, disruptive innovation, or shifting regulation. That distinction matters for PT XYZ, whose operating environment is shaped mainly by regulatory turbulence rather than competitive or technological disruption.

2.4. Organizational Agility

Sharifi and Zhang (1999) were the first to conceptualize organizational agility, within the agile-manufacturing literature, defining it as an organization's ability to survive change, cope with adverse conditions, and seize emerging opportunities amid unpredictable business environments. Their framework separates external “change drivers”, market volatility, competition, customer demands, from the internal capabilities an organization must build in response.

Four capabilities make up organizational agility in their framework. Responsiveness is the ability to notice changes quickly, react to them, proactively or reactively, and recover from them fast.

Competency is the broad set of abilities that let an organization pursue its goals efficiently and effectively, contributing directly to agility.

Flexibility, or adaptability, is the capacity to carry out different tasks and reach different goals using the same resources and facilities.

Speed, the fourth, is the ability to complete activities as quickly as possible, shrinking the gap between spotting an opportunity and acting on it.

That manufacturing-centric view has since been substantially expanded. Drawing on a systematic review of 110 peer-reviewed articles, Asghar, Kanbach, and Kraus (2025) redefined organizational agility as a bundle of interrelated dynamic capabilities rather than a single trait, spanning macro-agility, such as

strategic and partnering agility that operate at the level of an organization's relationship with its external environment, and micro-agility, covering the operational, innovation, and workforce agility that play out inside the organization's own processes and people.

They also identified four interconnected antecedent dimensions behind it. Contextual factors are the external conditions, economic shifts, regulatory pressure, that call for an agile response. Fundamental attributes are the organization's own structure and culture, which can either enable or block agility. Vital enablers are the concrete mechanisms, including leadership, technology, and human capital, that actively build agile capability. Dynamic capabilities, the fourth, are the higher-order routines through which an organization senses changes, acts on them, and reconfigures its resources.

That four-dimensional model gives a far more holistic account of where organizational agility originates than earlier manufacturing-centric models did, and it explicitly places leadership among the vital enablers through which agility gets built.

As with strategic agility, though, the empirical link to leadership is far from settled, Hat, Sunarto, and Nenobais (2025) found a significant direct relationship, while Meilina (2024) found none at all between the same two constructs, as already discussed in Section 2.2.

That contradiction is precisely why further testing across different organizational and industry contexts, including the extractive-industry setting examined here, is needed.

2.5. Company Performance

Venkatraman and Ramanujam's (1986) classification scheme is the conventional starting point for understanding company performance, distinguishing it along two dimensions: the type of indicator used, financial or broader operational, and the source of the data, primary or secondary.

Financial performance is typically measured through profitability, growth, and market value, while operational performance captures non-financial competitive outcomes such as market share, product quality, and technological efficiency, together the two central domains through which performance should be assessed.

Relying on financial indicators alone, Venkatraman and Ramanujam (1986) further argue, risks an incomplete picture, particularly in industries where non-financial factors such as operational efficiency and stakeholder relationships shape long-run outcomes without showing up immediately in financial statements.

That distinction matters especially for extractive-industry firms such as PT XYZ, where regulatory compliance and community relations can materially affect the firm's ability to sustain production and, ultimately, its financial performance.

Subsequent scholarship extended this financial-operational distinction. Kaplan and Norton (2005), through the Balanced Scorecard framework, argue that performance measurement needs to account for four perspectives: financial performance, customer satisfaction, internal business processes, and organizational learning and growth.

Non-financial dimensions such as innovation capacity, employee capability, and customer loyalty, they contend, are just as critical to sustained performance, and often precede financial outcomes rather than simply follow from them, since a firm's results in any period largely reflect decisions made in earlier ones.

That broader, multidimensional view matters most for firms in volatile, resource-dependent industries, where non-financial capabilities, regulatory responsiveness and operational adaptability among them, can materially shape long-term financial outcomes.

Company performance, in this study, is accordingly conceptualized as encompassing both financial outcomes and the operational and non-financial capabilities that underpin them, consistent with the operationalization presented in Chapter III.

2.6. Hypothesis Development

Building on the theoretical foundations established above, this section develops seven hypotheses reflecting the parallel-mediation structure of this study's research model.

2.6.1. Leadership Agility positively affects Strategic Agility

Leadership agility, in Joiner's (2019) view, is the originating capability behind an organization's broader strategic responsiveness, leaders strong in context-setting and stakeholder agility are, he argues, better equipped to drive the strategic sensitivity and leadership unity that Doz and Kosonen (2010) treat as core to strategic agility.

The capacity to step back and accurately read a complex situation, a defining feature of leadership agility (Joiner & Josephs, 2007), puts leaders in a better position to cultivate the open dialogue and collective decision-making that strategic agility depends on.

Self-leadership agility, a leader's willingness to revise their own assumptions as new information comes in, closely parallels what Doz and Kosonen (2010) call strategic sensitivity: the capacity to detect strategic shifts early.

H1: Leadership Agility positively affects Strategic Agility.

2.6.2. Leadership Agility positively affects Organizational Agility

A significant positive relationship between leadership agility and organizational agility was empirically confirmed by Gulo, Purwoko, and Zulkifli (2025), and echoed by Hat, Sunarto, and Nenobais (2025) within Indonesia's public sector.

The theoretical rationale, per Joiner (2019), is straightforward: leaders who sense environmental shifts and adapt their own behavior accordingly are positioned to translate that sensing into the organization-wide responsiveness, competency, flexibility, and speed that Sharifi and Zhang (1999) identify as the four core capabilities of organizational agility.

Stakeholder agility and creative agility especially (Joiner & Josephs, 2007) feed directly into the vital enablers that Asghar, Kanbach, and Kraus (2025) identify as antecedents of organizational agility.

H2: Leadership Agility positively affects Organizational Agility.

2.6.3. Strategic Agility positively affects Company Performance

A systematic review by Tripathy and Lenka (2024) confirmed that strategic agility positively influences organizational performance: firms stronger in strategic sensitivity, resource fluidity, and leadership unity anticipate market shifts and reallocate resources ahead of competitors (Doz & Kosonen, 2010), which translates directly into the stronger financial and operational outcomes Venkatraman and Ramanujam (1986) describe.

Sensing regulatory and market shifts early, and reallocating resources fluidly in response, should therefore leave an organization better positioned to sustain both the financial and non-financial performance dimensions Kaplan and Norton (2005) describe.

H3: Strategic Agility positively affects Company Performance.

2.6.4. Organizational Agility positively affects Company Performance

Organizational agility, Asghar, Kanbach, and Kraus (2025) establish, is a critical capability for achieving and sustaining competitive advantage precisely because it lets firms reconfigure structure and operations as environments shift rapidly.

Sharifi and Zhang (1999) make a similar case: organizations stronger in responsiveness, competency, flexibility, and speed are better positioned to survive adverse conditions and capture emerging opportunities, effects that should show up in both the operational and financial dimensions Venkatraman and Ramanujam (1986) describe.

For an extractive-industry firm such as PT XYZ, the ability to respond quickly to shifting production quotas or permit requirements is plausibly a direct determinant of sustained operational and financial performance.

H4: Organizational Agility positively affects Company Performance.

2.6.5. Leadership Agility positively affects Company Performance

Leadership agility's influence on company performance need not run only through Strategic Agility and Organizational Agility, agile leaders are inherently better positioned to make timely, high-quality decisions that affect outcomes independent of the systems already in place (Joiner & Josephs, 2007).

That direct effect has empirical backing: Gulo, Purwoko, and Zulkifli (2025) found leadership agility significantly affects company performance even after accounting for organizational agility as a parallel pathway.

H5: Leadership Agility positively affects Company Performance.

2.6.6. Strategic Agility mediates the effect of Leadership Agility on Company Performance

Leadership agility's total effect on company performance need not run only through H1 and H3 taken separately, part of it may travel indirectly, first strengthening an organization's strategic sensitivity, resource fluidity, and leadership unity (Doz & Kosonen, 2010), which then feed into the improved financial and operational outcomes Venkatraman and Ramanujam (1986) describe.

Zhao, Lynch, and Chen (2010) make the case that such indirect pathways need to be tested explicitly rather than assumed, if the goal is to capture accurately how a construct like leadership agility actually produces its effects on a distal outcome.

Direct empirical precedent for this kind of pathway comes from Gulo, Purwoko, and Zulkifli (2025), who formally confirmed that agility constructs mediate the relationship between organizational-level antecedents and company performance.

H6: Strategic Agility mediates the effect of Leadership Agility on Company Performance.

2.6.7. Organizational Agility mediates the effect of Leadership Agility on Company Performance

A second indirect route runs through organizational agility (H2), which in turn drives performance outcomes (H4). Joiner (2019) theorizes leadership agility as the originating capability behind the organization-wide responsiveness, competency, flexibility, and speed that Sharifi and Zhang (1999) treat as the core dimensions of organizational agility, implying that much of leadership agility's influence on performance may travel through this organizational channel.

This pathway, too, has direct empirical support: Gulo, Purwoko, and Zulkifli (2025) confirmed that organizational agility significantly mediates the effect of organizational-level antecedents on company performance.

H7: Organizational Agility mediates the effect of Leadership Agility on Company Performance.

2.7. Research Framework

Drawing the seven hypotheses together, Leadership Agility functions in this study as the exogenous construct, Strategic Agility and Organizational Agility as parallel mediators, and Company Performance as the endogenous construct, with Leadership Agility hypothesized to affect Company Performance both directly (H5) and indirectly through Strategic Agility (H1, H3, H6) and Organizational Agility (H2, H4, H7).

A parallel-mediation structure was chosen over a moderation structure because the theoretical expectation is that Strategic Agility and Organizational Agility are themselves shaped by Leadership Agility, not that they function as independent factors merely conditioning the strength of an existing relationship.

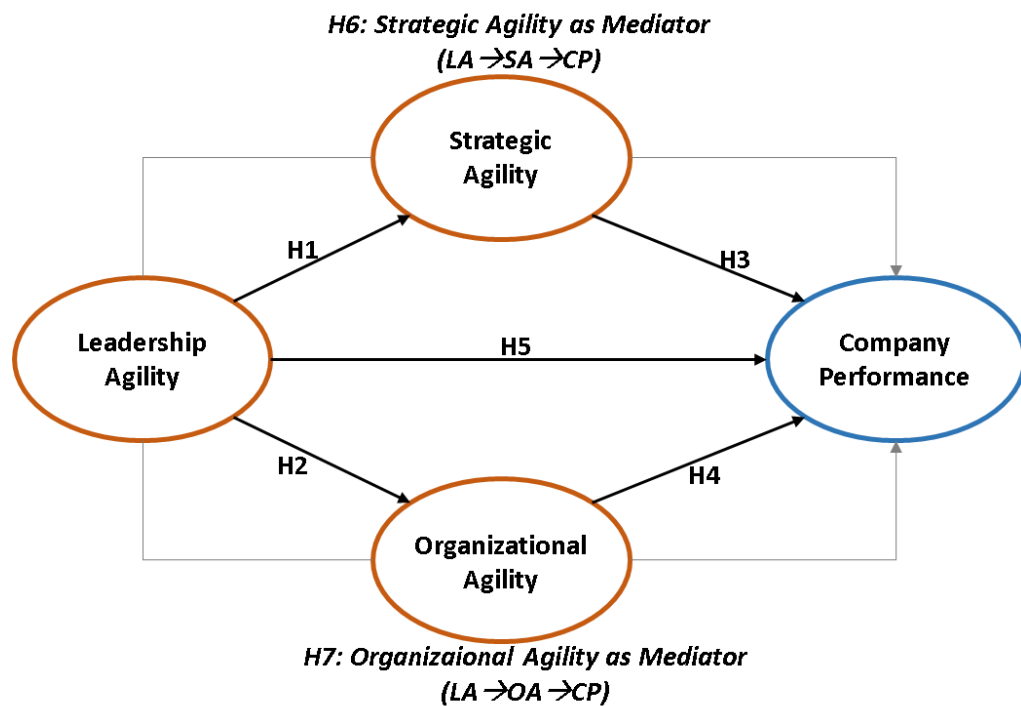


Figure 2.1 Research Framework

H1: Leadership Agility positively affects Strategic Agility

H2: Leadership Agility positively affects Organizational Agility

H3: Strategic Agility positively affects Company Performance

H4: Organizational Agility positively affects Company Performance

H5: Leadership Agility positively affects Company Performance

H6: Strategic Agility mediates the effect of Leadership Agility on Company Performance

H7: Organizational Agility mediates the effect of Leadership Agility on Company Performance

CHAPTER III

RESEARCH METHODS

3.1. Introduction

This chapter covers the research approach, strategy, and design used to test the seven hypotheses developed in Chapter II. It further explains the population and sampling technique, data collection method, operationalization of the four constructs, measurement scale, the procedures for testing instrument reliability and validity, the data analysis method, and the criteria for evaluating the measurement model, structural model, and hypothesis testing.

Each methodological choice is justified with reference to established research methodology literature. Ensuring the design is both academically defensible and practically suited to a single firm study at PT XYZ built around total population sampling of its tenure eligible workforce.

3.2. Research Approach

Three types of reasoning underlie research methodology: deductive, inductive, and abductive (Saunders, Lewis, & Thornhill, 2019). Deductive reasoning begins with an established theory and tests specific hypotheses derived from it against empirical data, whereas inductive reasoning begins with observations and builds theory from patterns in the data, and abductive reasoning moves iteratively between the two (Saunders et al., 2019).

This study adopts a deductive approach, as it begins from established theory, Joiner and Josephs's (2007) leadership agility framework, Doz and Kosonen's (2010) strategic agility framework, Sharifi and Zhang's (1999) organizational agility framework, and Venkatraman and Ramanujam's (1986) performance framework, and proceeds to test hypotheses derived from that theory using empirical data (Bell & Bryman, 2007).

A deductive approach is considered most appropriate when a study aims to test pre-existing, well-established constructs within a new organizational context (Saunders et al., 2019), as is the case for this study, which applies constructs

developed and validated in prior agility research to a previously untested extractive-industry setting.

3.3. Research Strategy

Research strategy is typically split into two broad camps: quantitative work, built around numerical data suited to hypothesis testing, and qualitative work, which explores conceptual depth through non-numerical data such as interviews or observations (Bell & Bryman, 2007).

This study lands on the quantitative side, since it is built to statistically test the strength and significance of the relationships among Leadership Agility, Strategic Agility, Organizational Agility, and Company Performance (Sekaran & Bougie, 2016). That fits the research questions in Chapter I, which ask about the direction, strength, and significance of specific hypothesized relationships, questions that call for numerical measurement and statistical inference rather than open-ended exploration.

3.4. Research Design

This study follows the Research Onion framework (Saunders et al., 2019) to structure its methodological choices across five layers: philosophy, approach, strategy, choices, and time horizon.

At the philosophical layer, this study adopts positivism, treating the four constructs as objectively measurable phenomena that can be captured through structured survey items and analyzed using statistical methods, rather than as subjective meanings requiring interpretive analysis (Saunders et al., 2019). At the approach layer, a deductive method is applied, consistent with Section 3.2.

At the strategy layer, a survey-based quantitative design is used to evaluate the hypothesized relationships, allowing data to be collected efficiently from the full population of PT XYZ employees. At the choices layer, this study uses a mono method quantitative design, relying solely on questionnaire data rather than combining quantitative and qualitative techniques, consistent with the deductive, hypothesis-testing purpose of the study.

At the time-horizon layer, this study employs a cross-sectional design, collecting data from PT XYZ employees at a single point in time rather than tracking changes longitudinally. A cross-sectional design is appropriate given the practical constraints of a master's thesis timeline and is consistent with the majority of PLS-SEM studies in the agility literature reviewed in Chapter II, including Gulo, Purwoko, and Zulkifli (2025) and de Diego Ruiz and Almodóvar (2026), both of which employed cross-sectional survey designs.

3.5. Type and Source of Data

This study uses both primary and secondary data. Primary data refers to data collected directly by the researcher for the specific purpose of the study, while secondary data refers to information gathered from existing sources originally collected for other purposes (Bougie & Sekaran, 2016).

Primary data were collected directly from PT XYZ employees through a structured questionnaire measuring the four constructs of this study. Secondary data were drawn from peer reviewed journal articles, industry reports, and academic references used throughout Chapters I and II, including sources on Indonesia's nickel industry, agility theory, and performance measurement.

Table 3.1 Type and Source of Data

Type of Data	Description	Source of Data
Primary Data	Respondents' answers to a structured questionnaire covering LA, SA, OA, and CP	Permanent and contract employees of PT XYZ
Secondary Data	Journal articles, industry reports, and academic references	Peer-reviewed journals, WRI, S&P Global, and academic supervisor feedback

3.6. Data Collection Method

Data collection ran through a structured questionnaire distributed via an online form, which allowed all 225 tenure-eligible PT XYZ employees to be reached efficiently within a reasonable window. A questionnaire, in Bougie and

Sekaran's (2016) terms, is a pre-formulated set of written questions to which respondents record their answers, typically within closely defined alternatives.

Items are closed-ended, measured on a five-point Likert scale from "1" Strongly Disagree to "5" Strongly Agree, standard practice for measuring attitudes and perceptions in organizational research (Bougie & Sekaran, 2016). Closed-ended, scaled items won out over open-ended ones because the study's deductive, hypothesis-testing purpose needs numerically comparable responses across all 225 respondents, not qualitative narrative data.

The link itself goes out through PT XYZ's official communication channels with support from Human Resources, so the survey reaches permanent and contract employees alike across every operational unit and organizational level. Respondents get a defined window to complete it, with a reminder issued partway through the collection period to push the response rate toward full participation across all 225 respondents.

Before full distribution, the academic supervisor reviews the questionnaire, and it gets pilot-tested on a small subsample to confirm the item wording reads clearly and unambiguously across PT XYZ's varied educational and occupational backgrounds.

3.7. Population and Sample

The population of this study consists of PT XYZ employees, both permanent and contract status, who had at least one year of tenure at the time of the survey, totaling 225 employees.

This tenure threshold was applied because meaningful judgments about leadership and organizational agility require sufficient exposure to the company's routines and decision processes; employees below that threshold were therefore excluded from the population itself, not merely from the analysis.

Because this eligible population is fully accessible within a single organization, this study applies total population sampling, a non-probability

technique in which every member of a purposively defined population is included as a respondent (Etikan, Musa, & Alkassim, 2016).

Total population sampling is not bound by a numerical ceiling in the way some census guidelines are; what matters, per Etikan et al. (2016), is whether the population sharing the relevant characteristic here, at least one year of tenure at PT XYZ, is small and well defined enough for every member to be reasonably reached. At 225 employees, the tenure eligible population at PT XYZ satisfies that condition: it is fully identifiable through company records and realistically accessible within a single organization.

Because PT XYZ is a single, bounded organization in which every tenure eligible employee can realistically be reached, total population sampling is methodologically justified here on feasibility grounds. It carries a distinct advantage over probability sampling: since the resulting data represent the full eligible population rather than an estimate drawn from it, there is no sampling error to account for, and no need to defend a specific sampling frame or random selection procedure, a task that can be difficult within a single, relatively small organization.

Adequacy of $N = 225$ for PLS-SEM Analysis

Sample adequacy for this study is evaluated against PLS-SEM specific standards, since the final analysis will be conducted using SmartPLS 4.1. Two commonly applied benchmarks are relevant.

The 10-times rule (Barclay, Higgins, & Thompson, 1995, as cited in Hair, Hult, Ringle, & Sarstedt, 2022) recommends a minimum sample size equal to 10 times the maximum number of structural paths pointing at any single construct in the model. In this study's structural model, Company Performance receives the highest number of incoming paths, from Leadership Agility, Strategic Agility, and Organizational Agility (three arrows), yielding a minimum required sample size of only 30.

The minimum R^2 method (Cohen, 1992, as applied by Hair et al., 2022), a more statistically rigorous power based approach, indicates that a model with three arrows pointing at one construct typically requires between approximately 120 and

160 respondents to achieve 80% statistical power at a 5% significance level, depending on the anticipated minimum effect size.

With 225 respondents, this study's sample size comfortably exceeds both benchmarks roughly 7.5 times the 10 times rule minimum and well above the more conservative power based estimate, indicating strong statistical power to detect even small to medium effect sizes across all seven hypothesized paths (Hair et al., 2022).

From a software standpoint, SmartPLS 4.1 imposes no meaningful capacity constraint at this sample size; PLS-SEM was specifically developed to perform reliably with small to medium samples (Hair et al., 2022), and the bootstrapping procedure used for significance testing (5,000 resamples) operates independently of the original sample's size beyond these minimum thresholds.

Comparison with Prior Research

This sample size and sampling technique are also consistent with precedent in the agility literature. Restiani, Boyas, Pujianto, and Violita (2025) tested the effect of leadership agility on MSME performance, mediated by adaptive capability, using a total population approach and SmartPLS 4.1, a design closely paralleling this study's.

Gulo, Purwoko, and Zulkifli (2025) tested a comparable leadership agility, organizational agility, performance model using 203 respondents in Jakarta's restaurant industry, while de Diego Ruiz and Almodóvar (2026) analyzed strategic agility using 173 respondents across Spanish multinational enterprises. At 225 respondents for a four construct, seven hypothesis model, this study's sample size is therefore adequate both by classical PLS-SEM rules of thumb and relative to precedent in closely related agility studies employing similar total-population designs.

Table 3.2 Sample Size Adequacy Benchmarks

Benchmark	Minimum Required N	This Study (N = 225)
10 times rule (Barclay et al., 1995)	30	Exceeds by 7.5x
Minimum R ² method (Cohen, 1992)	≈120 - 160	Exceeds comfortably
Etikan et al. (2016) total-population criterion	Population defined & fully accessible	Met; 225 tenure eligible employees, all reached
Comparable published studies	173 - 203	Within/above range

3.8. Operationalization of Variables

Each of the four constructs in this study is operationalized using five measurement items drawn directly from the theoretical dimensions established in Chapter II, ensuring content validity through direct alignment between each survey item and a specific, named dimension from the source theory rather than researcher-generated items unconnected to established constructs. Table 3.3 presents the complete operationalization.

Table 3.3 Operationalization of Variables

Variable	Item	Measurement Indicator	Source
Leadership Agility (LA)	LA1	Context Setting Agility - Leaders accurately read complex, changing situations before acting	Joiner & Josephs (2007)
	LA2	Stakeholder Agility - Leaders engage effectively with a wide range of stakeholders	Joiner & Josephs (2007)
	LA3	Creative Agility - Leaders generate innovative solutions to unfamiliar problems	Joiner & Josephs (2007)

Variable	Item	Measurement Indicator	Source
	LA4	Self Leadership Agility - Leaders reflect on and adapt their own leadership style	Joiner & Josephs (2007)
	LA5	Leaders make sound decisions quickly under uncertainty	Joiner (2019)
Strategic Agility (SA)	SA1	Strategic Sensitivity - The organization identifies strategic shifts early	Doz & Kosonen (2010)
	SA2	Resource Fluidity - Resources are quickly reallocated to emerging priorities	Doz & Kosonen (2010)
	SA3	Leadership Unity - Top management makes fast, collectively owned strategic decisions	Doz & Kosonen (2010)
	SA4	The organization regularly adjusts its strategic direction in response to external change	Doz & Kosonen (2008)
	SA5	Strategic decisions are informed by open, high quality internal dialogue	Doz & Kosonen (2010)
Organizational Agility (OA)	OA1	Responsiveness - The organization quickly identifies and reacts to change	Sharifi & Zhang (1999)
	OA2	Competency - The organization has the capabilities needed to pursue its goals efficiently	Sharifi & Zhang (1999)
	OA3	Flexibility - The organization accomplishes different tasks using the same resources	Sharifi & Zhang (1999)
	OA4	Speed - The organization completes operations and activities quickly	Sharifi & Zhang (1999)
	OA5	The organization can reconfigure its structure in response to a changing environment	Asghar, Kanbach, & Kraus (2025)

Variable	Item	Measurement Indicator	Source
Company Performance (CP)	CP1	Financial Performance - Profitability has improved over recent periods	Venkatraman & Ramanujam (1986)
	CP2	Operational Performance - Operational efficiency has improved	Venkatraman & Ramanujam (1986)
	CP3	The organization's market position has strengthened	Venkatraman & Ramanujam (1986)
	CP4	Non-financial performance (e.g., innovation, employee capability) has improved	Kaplan & Norton (2005)
	CP5	Overall, the organization is meeting its performance targets	Kaplan & Norton (2005)
	CP6	Regulatory/Social License Compliance - The organization's compliance with regulatory requirements and community expectations has strengthened	Venkatraman & Ramanujam (1986)

3.9. Measurement and Scaling

Every item in Table 3.3 runs on the same five-point Likert scale, "1" Strongly Disagree through "5" Strongly Agree, standard practice for measuring perceptual constructs in organizational research (Bougie & Sekaran, 2016).

Five points, rather than seven or ten, keeps the number of response options manageable for respondents while still giving PLS-SEM estimation enough variance to work with, and it matches the scale used in comparable agility studies reviewed in Chapters I and II, Gulo, Purwoko, and Zulkifli (2025) among them.

3.10. Reliability and Validity of the Instrument

Ahead of full data collection, a pilot test on a smaller subsample checks the questionnaire's reliability and validity, giving any weak or ambiguous items a chance to be revised before the full population of 225 employees sees them.

Reliability is assessed with Cronbach's Alpha (Cronbach, 1951), a measure of internal consistency showing how closely items within a construct produce similar, stable responses, with 0.70 treated as the threshold confirming that items measuring the same construct are sufficiently correlated (Hair et al., 2022).

Validity, in turn, is assessed via Pearson Correlation, with a coefficient above 0.30 taken as indicative of a valid item-construct relationship (Sekaran & Bougie, 2016); any item falling below that threshold in the pilot test gets reviewed for possible revision or removal before full-scale data collection begins.

Table 3.4 Cronbach Alpha Criteria

Cronbach's Alpha	Classification
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$\alpha < 0.6$	Not Acceptable

3.11. Data Analysis Method

After all data has been collected from the total-population survey, the following steps will be conducted to process the data.

3.11.1. Data Preparation

Prior to descriptive and inferential analysis, the collected data will undergo screening and editing to identify missing values and outliers (Hair et al., 2022). Any incomplete questionnaire responses will be checked using the survey platform's mandatory response setting, ensuring each question must be answered before a respondent can proceed, which is expected to minimize missing data given the total population design and internal distribution within a single organization.

Outliers will be identified through standard interval/ratio data screening procedures (Hair et al., 2022), examining each item's minimum, maximum, and

distributional characteristics, and addressed prior to model estimation if any respondent's answer pattern appears implausible (for example, identical responses across all items, suggesting inattentive completion).

3.11.2. Respondent Profile and Descriptive Analysis

Descriptive analysis will be conducted to summarize the demographic profile of respondents, including gender, age, education level, and tenure at PT XYZ, along with the mean, standard deviation, and distributional characteristics (skewness and kurtosis) of each measurement item, to assess normality and provide an overview of respondents' perceptions across the four constructs (Sekaran & Bougie, 2016). Skewness values within the range of -2 to +2 will be considered indicative of an acceptably normal distribution for PLS-SEM estimation purposes, consistent with common practice in the reviewed literature.

3.12. Model Evaluation

This study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4.1, appropriate for models involving multiple interrelated constructs and both measurement and structural components (Hair et al., 2022). PLS-SEM is particularly suited to this study because it can estimate the measurement and structural models simultaneously, accommodates complex models with multiple mediating pathways such as the parallel-mediation structure developed in Chapter II, and does not require normally distributed data, a practical advantage given the ordinal, Likert scale nature of the data collected (Hair et al., 2022).

Measurement model evaluation will assess three criteria. First, indicator reliability will be assessed through outer loadings, with a threshold above 0.70 considered acceptable, indicating that each observed item adequately reflects its underlying latent construct. Second, internal consistency will be assessed through Composite Reliability, with a threshold above 0.70 considered acceptable. Third, convergent validity will be assessed through Average Variance Extracted (AVE), with a threshold above 0.50 considered acceptable, indicating that a construct explains more than half of the variance in its indicators.

Discriminant validity, in turn, will be assessed through the Heterotrait-Monotrait Ratio (HTMT), with values below the conservative 0.90 threshold indicating that Leadership Agility, Strategic Agility, Organizational Agility, and Company Performance are empirically distinguishable from one another rather than measuring overlapping concepts (Hair et al., 2022).

Structural model evaluation will assess four criteria: collinearity, through the Variance Inflation Factor (VIF), with values below 5 considered acceptable (Hair et al., 2022); path coefficients (β), indicating the strength and direction of each hypothesized relationship; the coefficient of determination (R^2), indicating the proportion of variance in each endogenous construct explained by its predictors, with values of 0.25, 0.50, and 0.75 conventionally interpreted as weak, moderate, and substantial, respectively (Hair et al., 2022); and effect size (f^2), indicating each predictor's individual contribution to a given R^2 value.

Table 3.5 summarizes the complete set of measurement and structural model evaluation criteria applied in this study, consolidating the thresholds referenced above into a single reference table used throughout the Chapter IV analysis.

Table 3.5 Summary of Model Evaluation Criteria

Stage	Criterion	Threshold
Measurement Model	Outer Loading (indicator reliability)	> 0.70
	Composite Reliability (internal consistency)	> 0.70
	Average Variance Extracted (convergent validity)	> 0.50
	Heterotrait Monotrait Ratio (discriminant validity)	HTMT < 0.90
Structural Model	Variance Inflation Factor (collinearity)	< 5
	Coefficient of Determination (R^2)	0.25 / 0.50 / 0.75 = weak / moderate / substantial

Stage	Criterion	Threshold
	Effect Size (f^2)	0.02 / 0.15 / 0.35 = small / medium / large
Hypothesis Testing	Path coefficient significance (H1–H5)	$t > 1.65$, $p < 0.05$ (one-tailed)
	Specific indirect effect (H6–H7)	Bootstrapped CI excludes zero

3.13. Hypothesis Testing

Hypotheses H1 through H5 will be tested using standard path coefficient bootstrapping with 5,000 resamples, with a t-value above 1.65 and a p-value below 0.05 (one tailed, 5% significance level) considered statistically significant (Hair et al., 2022). A one tailed test is used because each of these five hypotheses specifies a directional (positive) relationship, consistent with the theoretical rationale developed in Chapter II.

Hypotheses H6 and H7, which test the mediating roles of Strategic Agility and Organizational Agility respectively, will be evaluated using specific indirect effect analysis, following the procedure recommended by Zhao, Lynch, and Chen (2010) and Hair et al. (2022), in which a bootstrapped confidence interval that does not straddle zero indicates a statistically significant mediation effect.

This distinction in testing procedure reflects the conceptual difference between H1 - H5, which each represent a single structural path directly estimated by the model, and H6 - H7, which represent the multiplication of two structural paths (for example, for H6, the path capturing how Leadership Agility is affecting Strategic Agility, multiplied by the path capturing how Strategic Agility is affecting Company Performance) and therefore require a resampling-based approach to establish statistical significance, since the product of two coefficients does not follow a simple normal distribution (Zhao et al., 2010).

Together, Sections 3.12 and 3.13 provide the complete analytical procedure that will be applied to the data collected from PT XYZ's 225 tenure eligible employees, with results reported and interpreted in Chapter IV.

3.14. Ethical Considerations

Because this study collects data from the entirety of PT XYZ's tenure eligible workforce through a total population design, particular attention is given to protecting respondents' rights and ensuring data are collected and used responsibly (Bougie & Sekaran, 2016).

Participation in the questionnaire is voluntary; employees are informed of the study's academic purpose and are free to decline participation or withdraw at any point without any effect on their employment status. This is particularly important given the total population design, which by definition asks every eligible employee to participate, making explicit voluntary participation communication essential to avoid any perception of compulsion linked to organizational hierarchy.

Respondent confidentiality is maintained by collecting no personally identifying information beyond the demographic categories required for descriptive analysis in Section 3.11.2 (gender, age, education level, and tenure), and by reporting all results only in aggregate, statistical form rather than at the level of any identifiable individual.

Data collected through the online questionnaire will be stored securely and used solely for the purposes of this academic research, consistent with standard ethical practice in organizational survey research (Sekaran & Bougie, 2016).

CHAPTER IV

FINDINGS, ANALYSIS AND DISCUSSION

4. Findings, Analysis and Discussion

4.1. Introduction

This chapter presents the empirical results of the survey conducted among employees of PT XYZ. It covers the respondent profile, descriptive statistics of the research variables, evaluation of the measurement model, evaluation of the structural model, hypothesis testing results (H1 - H7), and a discussion of the findings in relation to the theoretical framework developed in Chapter II. Data from 207 valid respondents were processed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.1, following the procedures specified in Chapter III.

4.2. Respondent Profile

After the data cleaning process described in Section 3.11.1 (removal of duplicate submissions, straight lining responses, and respondents outside the defined population), the final dataset used for analysis consists of 207 valid respondents.

Table 4.1 presents the demographic and employment profile of the 207 respondents, based on Status Kepegawaian (employment status), Lama Bekerja (tenure), and Departemen/Unit Kerja (department).

Table 4.1 Respondent Profile (N = 207)

Characteristic	Category	Frequency	Percentage (%)
Employment Status	Contract/Others	157	75.8
	Permanent Employee	50	24.2
Tenure	< 1 year	0	0.0
	1–3 years	92	44.4
	3–5 years	87	42.0
	> 5 years	28	13.5
Department	Mine Operation & Production	59	28.5
	Quality Control	40	19.3
	Health, Safety & Security	31	15.0
	People Investment	14	6.8

Characteristic	Category	Frequency	Percentage (%)
	Operation Support	13	6.3
	Finance & Accounting	12	5.8
	Environment	10	4.8
	Sales, Marketing & Port Management	7	3.4
	Supply Chain Management	5	2.4
	MR & Permit	3	1.4
	Corporate Secretary & Legal	3	1.4
	Social Investment	3	1.4
	Exploration	2	1.0
	Others (Utility, GA, General Manager/KTT, etc.)	5	2.4

The respondent profile shows that the majority of participants are contract employees (75.8%), reflecting PT XYZ 's operational workforce structure typical of the mining industry. In terms of tenure, most respondents have worked at PT XYZ between 1 - 5 years (86.4% combined for the 1 - 3 and 3 - 5 year brackets), with no respondents below one year of tenure, indicating that all participants have sufficient organizational exposure to meaningfully assess the leadership, strategic, and organizational agility constructs.

By department, respondents are concentrated in core operational functions: Mine Operation & Production (28.5%), Quality Control (19.3%), and Health, Safety & Security (15.0%), collectively representing 62.8% of the sample, consistent with PT XYZ 's operational emphasis as a nickel mining company.

4.2.1. Employment Status and Workforce Representation

Employment status here skews toward execution: contract and other non-permanent employees make up 75.8% of respondents, against 24.2% permanent, which means the empirical results are shaped mainly by employees working within PT XYZ's execution-oriented workforce.

That split is not meant as a comparison of performance between employment groups, it simply provides context for reading the organizational perceptions the survey captured. Employees working close to operational activities tend to feel the practical consequences of leadership decisions, resource reallocation, cross-

functional coordination, and shifting work priorities most directly, all of which bear on the agility constructs this study examines.

The composition also means perceptions of agility here are not coming only from managerial or corporate-support viewpoints. A large operational workforce sees firsthand how quickly strategic decisions turn into work instructions, manpower deployment, contractor coordination, safety controls, production priorities, and responses to regulatory requirements.

That makes the sample profile a useful lens for checking whether leadership agility actually translates into strategic and organizational responsiveness in day-to-day operations.

4.2.2. Tenure and Organizational Exposure

Tenure provides an important contextual indicator because meaningful evaluation of leadership and organizational agility requires sufficient exposure to the company's routines, decision processes, and responses to change. In this sample, 44.4% of respondents have worked for 1 - 3 years and 42.0% for 3 - 5 years, meaning that 86.4% of respondents have between one and five years of organizational experience.

A further 13.5% have more than five years of tenure. The absence of respondents with less than one year of tenure reduces the likelihood that the results are dominated by employees who have had only limited exposure to PT XYZ 's operating environment.

This tenure structure is particularly relevant in the context described in Chapter I, where PT XYZ has experienced rapid organizational and operational change since its transition into a nickel mining company. Respondents with multi year tenure are more likely to have observed variations in production conditions, regulatory requirements, organizational arrangements, and leadership responses. Their assessments therefore reflect accumulated experience with how the organization senses change, reallocates resources, coordinates action, and sustains performance under uncertainty.

4.2.3. Departmental Representation

Departmental representation further strengthens the operational relevance of the dataset. Mine Operation & Production contributes 28.5% of respondents, Quality Control 19.3%, and Health, Safety & Security 15.0%. Together these three functions represent 62.8% of all valid responses.

At the same time, the remaining respondents come from People Investment, Operation Support, Finance & Accounting, Environment, Sales, Marketing & Port Management, Supply Chain Management, Management Representative & Permit, Corporate Secretary & Legal, Social Investment, Exploration, and other supporting functions. The dataset therefore combines strong operational representation with perspectives from corporate and enabling functions.

This distribution is advantageous for the present research because Strategic Agility and Organizational Agility are cross functional phenomena. Strategic sensitivity and resource fluidity are not confined to one department, while organizational responsiveness, flexibility, competency, and speed depend on coordination across operating and support functions.

The presence of respondents from both core production and enabling functions therefore provides a broader organizational assessment than would be obtained from a single-department sample.

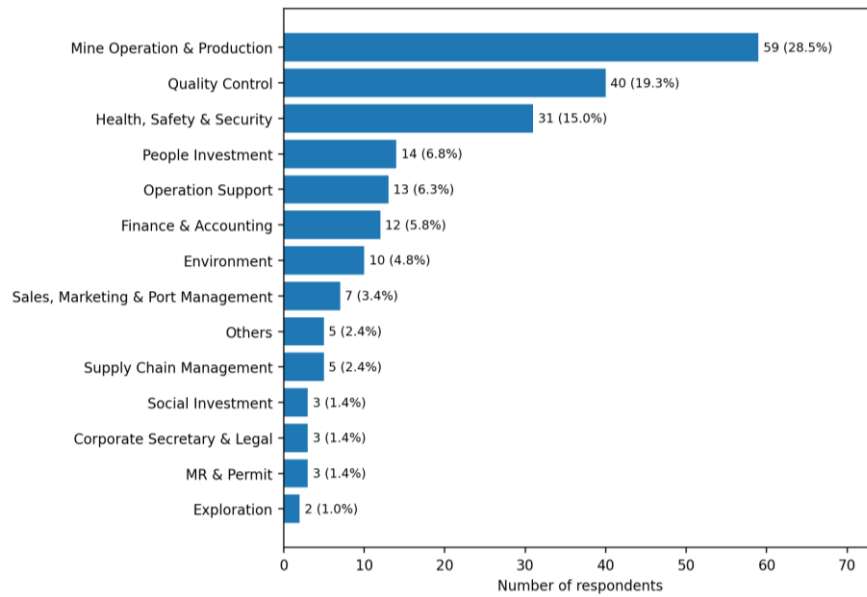


Figure 4.1 Respondent Distribution by Department (N = 207)

4.3. Descriptive Statistics of Research Variables

Table 4.2 presents the descriptive statistics (mean, standard deviation, skewness, and kurtosis) for each of the 21 measurement items across the four constructs. Skewness values ranged from -1.18 to -0.01 and kurtosis values ranged from -0.73 to 2.88, all within the ± 2 range considered acceptable for PLS-SEM estimation (Hair et al., 2022).

Table 4.2 Descriptive Statistics of Measurement Items (N = 207)

Item	Dimension	Mean	SD	Skewness	Kurtosis
LA1	Context-Setting Agility	4.10	0.79	-1.18	2.88
LA2	Stakeholder Agility	4.15	0.67	-0.47	0.35
LA3	Creative Agility	4.01	0.60	-0.28	0.80
LA4	Self-Leadership Agility	3.86	0.71	-0.69	1.27
LA5	Decisiveness under Uncertainty	4.00	0.85	-0.72	0.33
SA1	Strategic Sensitivity	3.95	0.62	-0.09	-0.01
SA2	Resource Fluidity	3.81	0.72	-0.26	-0.05
SA3	Leadership Unity	4.13	0.71	-0.51	0.11
SA4	Strategic Responsiveness	4.00	0.66	-0.20	-0.09
SA5	Internal Dialogue Quality	3.99	0.76	-0.57	0.59
OA1	Responsiveness	3.98	0.75	-0.58	0.33

Item	Dimension	Mean	SD	Skewness	Kurtosis
OA2	Competency	3.87	0.78	-0.44	-0.04
OA3	Flexibility	3.92	0.77	-0.76	0.98
OA4	Speed	4.03	0.71	-0.30	-0.23
OA5	Structural Agility	4.00	0.78	-0.36	-0.40
CP1	Financial Performance	4.11	0.78	-0.38	-0.73
CP2	Operational Performance	3.91	0.79	-0.38	0.05
CP3	Market Position	3.88	0.70	-0.01	-0.56
CP4	Non-Financial Performance	3.89	0.71	-0.67	1.81
CP5	Overall Performance	4.05	0.66	-0.47	1.38
CP6	Regulatory/Social License Compliance	4.18	0.66	-0.41	0.15

At the construct level, the average composite score was highest for Leadership Agility ($M = 4.02$, $SD = 0.50$), followed by Company Performance ($M = 4.00$, $SD = 0.51$), Strategic Agility ($M = 3.97$, $SD = 0.52$), and Organizational Agility ($M = 3.96$, $SD = 0.57$), indicating that respondents generally perceive agility-related practices and company performance at PT XYZ positively, with moderate variability across responses.

4.3.1. Construct Level Descriptive Comparison

To line up with the final measurement model used in the PLS-SEM analysis, the construct-level descriptive comparison was recalculated on the retained indicators: Leadership Agility, now based on LA2-LA5 after LA1's removal, comes to a mean of 4.01 ($SD = 0.52$); Company Performance sits at 4.00 ($SD = 0.51$); Strategic Agility at 3.97 ($SD = 0.52$); and Organizational Agility at 3.96 ($SD = 0.57$).

That narrow range, roughly 3.96 to 4.01, says respondents generally view all four constructs favorably, without singling out any one domain as dramatically stronger or weaker.

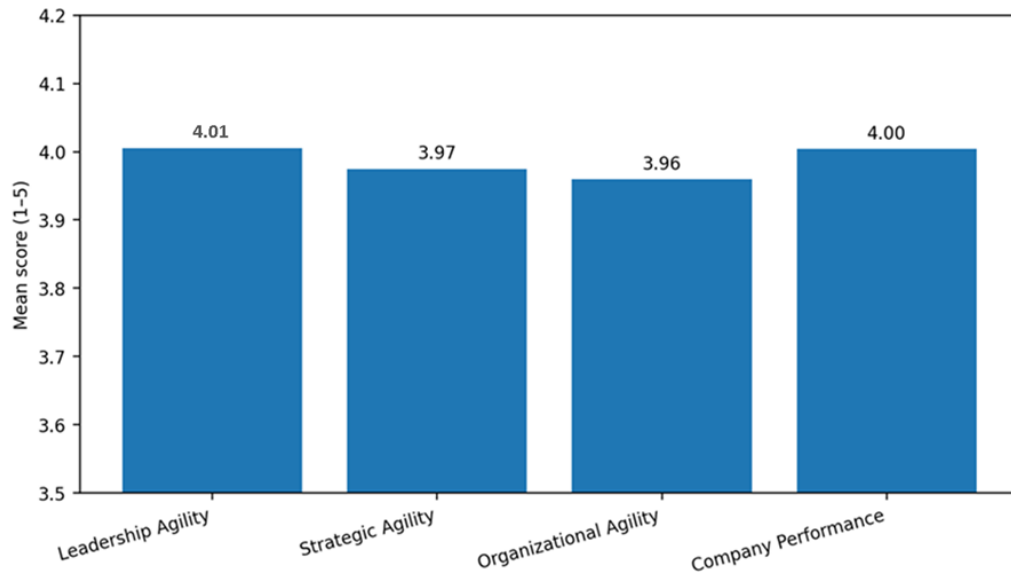


Figure 4.2 Mean Scores of Research Constructs (Final-Model Indicators)

That similarity should not be read as evidence the constructs are empirically identical, though. Descriptive means only capture the average level of agreement; whether the indicators represent statistically distinguishable latent constructs is a separate question the measurement model assessment answers.

Section 4.4's HTMT results confirm discriminant validity even so, despite respondents rating the constructs at similarly high levels, an important distinction, since high perceived levels of leadership, strategic agility, organizational agility, and performance can coexist with meaningful differences in how the constructs actually relate to one another structurally.

Organizational Agility's slightly larger standard deviation (0.57) points to more variation in how employees perceive organization-wide responsiveness, flexibility, competency, and speed, practically speaking, experiences of organizational agility may simply be less uniform across departments than perceptions of leadership or company performance are.

Since this study was not designed as a formal multi-group comparison by department, that observation stays descriptive here, a useful direction for future research rather than a hypothesis tested in its own right.

Table 4.3 Construct Level Descriptive Statistics (Final Model Indicators)

Construct	Mean	SD	Descriptive Reading
Leadership Agility	4.01	0.52	High / favorable perception
Strategic Agility	3.97	0.52	High / favorable perception
Organizational Agility	3.96	0.57	High / favorable perception
Company Performance	4.00	0.51	High / favorable perception

4.3.2. Leadership Agility Item Pattern

Among the retained Leadership Agility indicators, Stakeholder Agility (LA2) comes out highest ($M = 4.15$), followed by Creative Agility (LA3, $M = 4.01$) and Decisiveness under Uncertainty (LA5, $M = 4.00$), while Self-Leadership Agility (LA4) sits lowest ($M = 3.86$). That relatively high LA2 score suggests respondents generally see their leaders as capable of engaging and working with stakeholders.

That capability matters a great deal in a mining organization operating under regulatory, community, safety, and operational pressures, where leadership decisions often need alignment among parties whose priorities do not naturally overlap.

Self-Leadership Agility's comparatively lower score does not signal a weak spot, the mean still sits well above the midpoint of the five-point scale. It marks a relative development opportunity within an otherwise positively rated construct instead, one concerned with reflection, willingness to reconsider one's own assumptions, and adapting one's leadership approach.

That dimension matters most precisely when external conditions shift quickly and old assumptions about regulation, production, stakeholder expectations, or resource availability stop holding.

4.3.3. Strategic Agility Item Pattern

Strategic Agility item means range from 3.81 to 4.13. SA3 records the highest mean ($M = 4.13$), while SA2 records the lowest ($M = 3.81$). This pattern indicates that respondents generally recognize the presence of strategic agility, but some

components are perceived less strongly than others. Because Strategic Agility in the theoretical framework is built from strategic sensitivity, resource fluidity, and leadership unity. The item level variation is useful for identifying where the organization may experience greater difficulty in translating strategic awareness into flexible resource deployment and coordinated decisions.

The relatively lower item score should be interpreted together with the structural finding that Leadership Agility has its strongest effect on Strategic Agility ($\beta = 0.558$; $f^2 = 0.452$). In other words, the descriptive results identify room for improvement within the strategic agility construct. And the structural model indicates that leadership capability is a particularly important lever through which such improvement may be achieved.

4.3.4. Organizational Agility Item Pattern

Organizational Agility items range from 3.87 to 4.03: OA4 comes out highest ($M = 4.03$), followed by OA5 ($M = 4.00$), with OA2 lowest ($M = 3.87$), and the construct also carries the largest standard deviation of the four. Together, that says employees generally see the organization as agile, even though their experiences of responsiveness, competency, flexibility, and speed are not entirely uniform across the workforce.

That matters substantively, since Organizational Agility carries the strongest direct coefficient among the three predictors of Company Performance ($\beta = 0.315$), even a modest improvement in how consistently agility is experienced across functions could carry real weight for performance.

The descriptive picture and the structural analysis fit together, then: Organizational Agility is positively perceived, yet it is also where employees show the most variation in perception, and the domain carrying the strongest direct path to performance of the three predictors.

4.3.5. Company Performance Item Pattern

Company Performance item means are also favorable, ranging from 3.88 to 4.18. CP6 records the highest mean ($M = 4.18$), followed by CP1 ($M = 4.11$) and CP5 ($M = 4.05$), while CP3 records the lowest mean ($M = 3.88$). The variation across

performance items is consistent with the multidimensional definition adopted in Chapter II. It treats company performance as broader than a single financial outcome and includes operational and non financial dimensions that support sustained performance.

Because Company Performance is measured perceptually in this study, these means should be interpreted as employees' assessments rather than as substitutes for audited financial or operational records. Their value lies in capturing how the organization is perceived to perform across the dimensions represented in the questionnaire. The subsequent PLS-SEM analysis then examines how much variation in these perceptions is statistically associated with Leadership Agility, Strategic Agility, and Organizational Agility.

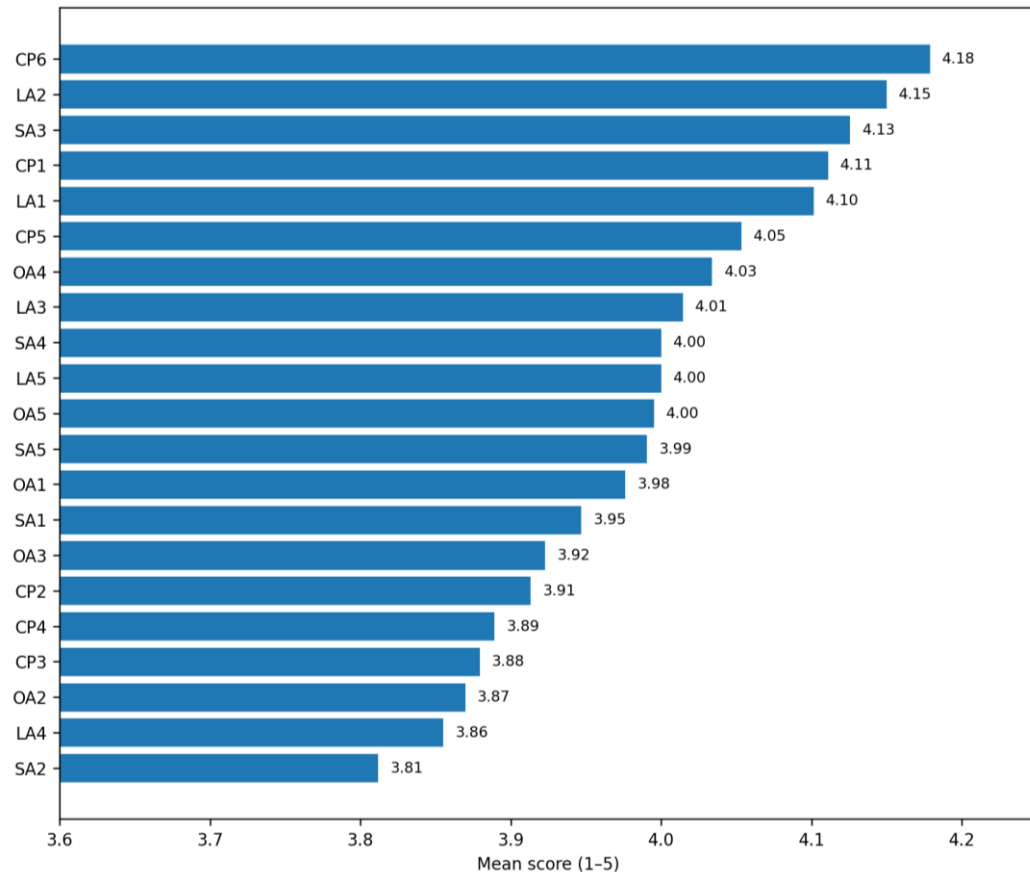


Figure 4.3 Ranking of Measurement Item Means (N = 207)

4.4. Measurement Model Evaluation

Following the procedure specified in Section 3.12, the measurement (outer) model was evaluated based on indicator reliability (outer loadings), internal consistency reliability (Cronbach's Alpha and Composite Reliability), convergent validity (Average Variance Extracted), and discriminant validity (Heterotrait - Monotrait Ratio).

4.4.1. Initial Model and Indicator Purification

The first PLS Algorithm run (Model 1) evaluated all 21 original indicators, and three of Leadership Agility's, LA1 (0.606), LA3 (0.647), and LA4 (0.629), fell below the recommended 0.70 threshold; as a result, the construct's AVE (0.468) fell short of the 0.50 convergent-validity threshold too.

Hair et al.'s (2022, p.126) purification procedure allows indicators with loadings below 0.70 to be dropped if doing so improves model quality, so LA1, the lowest-loading and most problematic indicator, was removed and the model re-estimated as Model 2.

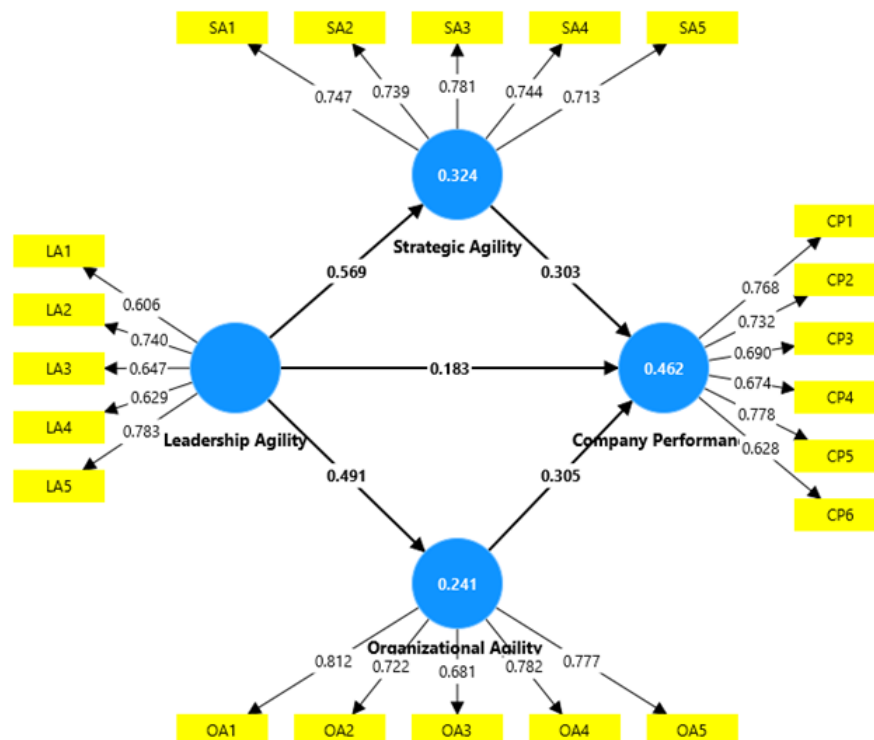


Figure 4.4 Initial Measurement Model (Model 1)

Figure 4.4 visualizes the initial measurement model and makes the purification decision transparent. The issue is concentrated in the Leadership Agility block rather than being distributed across all constructs. LA1 has the lowest loading (0.606), while the construct level AVE of 0.468 is below the required convergent validity threshold. This pattern supports a targeted refinement rather than broad indicator deletion across the model.

Dropping LA1 lifted Leadership Agility's AVE to 0.528, past the 0.50 threshold, while Composite Reliability edged up from 0.813 to 0.817. The remaining borderline indicators, LA3, LA4, OA3, CP3, CP4, and CP6, all sitting in the 0.40-0.70 range, stayed in the model because their constructs' AVE and Composite Reliability already cleared the required thresholds; removing them would only have cost conceptual representativeness without any real gain in model quality (Hair et al., 2022, p.126).

Every result reported from here on in this chapter refers to that final, purified model, Model 2, comprising 20 indicators in total: LA2-LA5 (4 items), SA1-SA5 (5 items), OA1-OA5 (5 items), and CP1-CP6 (6 items).

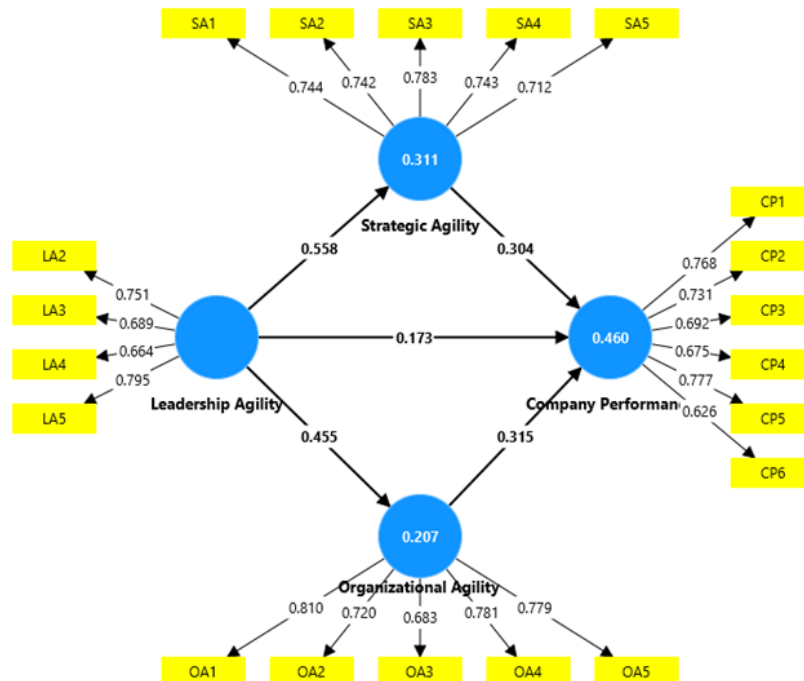


Figure 4.5 Final Measurement Model after Indicator Purification (Model 2)

Table 4.4 Initial vs Final Measurement Model Comparison

Metric	Initial Model	Final Model	Interpretation
Leadership Agility indicators	5	4	LA1 removed
Lowest retained LA loading	0.606 (LA1)	0.664 (LA4)	Weakest indicator improved
Leadership Agility AVE	0.468	0.528	Convergent validity achieved
Leadership Agility CR	0.813	0.817	Reliability remained acceptable

Comparing the initial and final models shows just how parsimonious the refinement really was: removing a single indicator resolved the main measurement concern, lifting Leadership Agility's AVE from 0.468 to 0.528, while Composite Reliability stayed above threshold and even ticked up slightly. That outcome backs the decision to keep the other borderline indicators once construct-level validity and reliability were adequate, balancing statistical quality against conceptual coverage.

The purification also carries an interpretive implication for the rest of the thesis: structural paths involving Leadership Agility are estimated from the final four-indicator construct, not the original five-item specification. Descriptive references to LA1, accordingly, belong to the original questionnaire profile, while every inferential conclusion about Leadership Agility rests on LA2-LA5 in the final PLS-SEM model.

4.4.2. Indicator Reliability (Outer Loadings) and Convergent Validity (AVE)

Table 4.5 Outer Loadings and Average Variance Extracted - Final Model

Construct	Item	Outer Loading (>0.70)	AVE (>0.50)
Leadership Agility	LA2	0.751	0.528
	LA3	0.689	
	LA4	0.664	
	LA5	0.795	
Strategic Agility	SA1	0.744	0.555
	SA2	0.742	
	SA3	0.783	
	SA4	0.743	
	SA5	0.712	

Construct	Item	Outer Loading (>0.70)	AVE (>0.50)
Organizational Agility	OA1	0.810	0.572
	OA2	0.720	
	OA3	0.683	
	OA4	0.781	
	OA5	0.779	
Company Performance	CP1	0.768	0.509
	CP2	0.731	
	CP3	0.692	
	CP4	0.675	
	CP5	0.777	
	CP6	0.626	

Source: Research data processed using SmartPLS 4.1 (2026)

The majority of indicators exceed the 0.70 loading threshold. Four indicators LA3 (0.689), LA4 (0.664), OA3 (0.683), and CP3, CP4, CP6 (0.692, 0.675, 0.626), fall in the 0.40 - 0.70 range but were retained per the reasoning in Section 4.4.1. All four constructs achieved AVE values above 0.50 (LA = 0.528, SA = 0.555, OA = 0.572, CP = 0.509), confirming that each construct explains more than half of the variance in its indicators and satisfies convergent validity.

4.4.3. Internal Consistency Reliability

Table 4.6 Construct Reliability - Final Model

Construct	Cronbach's Alpha	Composite Reliability (rho_c)	Conclusion
Leadership Agility	0.703	0.817	Reliable
Strategic Agility	0.801	0.862	Reliable
Organizational Agility	0.812	0.869	Reliable
Company Performance	0.806	0.861	Reliable

Source: Research data processed using SmartPLS 4.1 (2026)

All four constructs recorded Cronbach's Alpha and Composite Reliability values above the 0.70 threshold, confirming that the items within each construct produce internally consistent, reliable measurements.

4.4.4. Discriminant Validity (Heterotrait - Monotrait Ratio)

Table 4.7 Heterotrait - Monotrait Ratio (HTMT)

Construct Pair	HTMT	Conclusion
Leadership Agility ↔ Company Performance	0.637	Fit

Construct Pair	HTMT	Conclusion
Organizational Agility ↔ Company Performance	0.737	Fit
Organizational Agility ↔ Leadership Agility	0.585	Fit
Strategic Agility ↔ Company Performance	0.747	Fit
Strategic Agility ↔ Leadership Agility	0.724	Fit
Strategic Agility ↔ Organizational Agility	0.835	Fit

Source: Research data processed using SmartPLS 4.1 (2026)

All HTMT values fall below the conservative 0.90 threshold (Hair et al., 2022, p.123), ranging from 0.585 (Organizational Agility ↔ Leadership Agility) to 0.835 (Strategic Agility ↔ Organizational Agility). This confirms that each construct is empirically distinguishable from the others despite their conceptual proximity, including Leadership Agility and Strategic Agility (HTMT = 0.724), which, as discussed during the proposal stage, share a superficial resemblance through the Leadership Unity dimension of Strategic Agility.

The HTMT result empirically supports the conceptual distinction drawn earlier: Leadership Agility (an individual-level capability) and Leadership Unity (a collective, top-management-level capability) are indeed measuring distinct constructs.

4.5. Structural Model Evaluation

4.5.1. Collinearity Assessment (VIF)

Table 4.8 Collinearity Statistics (VIF)

Path	VIF	Multicollinearity
Effect of Leadership Agility on Company Performance	1.473	None
Effect of Leadership Agility on Organizational Agility	1.000	None
Effect of Leadership Agility on Strategic Agility	1.000	None
Effect of Organizational Agility on Company Performance	1.903	None
Effect of Strategic Agility on Company Performance	2.192	None

All VIF values are well below the 5.0 threshold recommended by Hair et al. (2022), ranging from 1.000 to 2.192, indicating that multi collinearity is not a concern in the structural model and that the path coefficient estimates can be interpreted reliably.

4.5.2. Coefficient of Determination (R^2)

Table 4.9 Coefficient of Determination (R^2)

Endogenous Construct	R^2	R^2 Adjusted	Interpretation
Strategic Agility	0.311	0.308	Weak
Organizational Agility	0.207	0.203	Weak
Company Performance	0.460	0.452	Weak

Leadership Agility explains 31.1% of the variance in Strategic Agility and 20.7% of the variance in Organizational Agility. Jointly, Leadership Agility, Strategic Agility, and Organizational Agility explain 46.0% of the variance in Company Performance.

Following Hair et al. (2022, p.195), R^2 values of 0.75, 0.50, and 0.25 are categorized as substantial, moderate, and weak, respectively; the R^2 values obtained here therefore fall in the weak-to-approaching-moderate range (Company Performance, at 0.460, sits just below the moderate threshold).

This indicates that while the hypothesized agility pathways make a meaningful contribution, a substantial share of variance in each endogenous construct, particularly Organizational Agility, is explained by factors outside the model, which is discussed further in Section 4.7 and as a limitation in Section 5.4.



Figure 4.6 Final Structural Model with Path Coefficients and R²

Figure 4.6 provides an integrated view of the structural model. The visual hierarchy is notable: the two largest coefficients originate from Leadership Agility and point toward the two agility capabilities, whereas the direct path from Leadership Agility to Company Performance is considerably smaller. At the same time, both Strategic Agility and Organizational Agility retain positive paths to Company Performance. This configuration is consistent with the study's parallel-mediation logic, in which leadership operates both directly and through two distinct capability-building channels.

The R² values should be interpreted as explanatory power rather than as absolute performance scores. The model explains 31.1% of the variation in Strategic Agility, 20.7% in Organizational Agility, and 46.0% in Company Performance.

The Company Performance value is particularly useful because it shows that the three agility constructs jointly account for a meaningful proportion of perceived performance variation. At the same time, substantial room remains for additional determinants not included in the model, such as market conditions, operational

resources, technology, contractor performance, regulatory approvals, organizational culture, or other industry-specific factors.

4.5.3. Effect Size (f^2)

Table 4.10 Effect Size (f^2)

Path	f^2	Interpretation
Leadership Agility → Strategic Agility	0.452	Large
Leadership Agility → Organizational Agility	0.260	Medium
Organizational Agility → Company Performance	0.097	Small
Strategic Agility → Company Performance	0.078	Small
Leadership Agility → Company Performance	0.038	Small

The effect size analysis reveals a clear hierarchy: Leadership Agility exerts a large effect on Strategic Agility ($f^2 = 0.452$) and a medium effect on Organizational Agility ($f^2 = 0.260$), confirming that Leadership Agility is by far the strongest driver among the antecedent relationships in the model.

In contrast, the direct contributions of Strategic Agility, Organizational Agility, and Leadership Agility to Company Performance are each individually small ($f^2 = 0.078$, 0.097 , and 0.038 , respectively), suggesting that Company Performance is driven by the combined, cumulative contribution of all three predictors rather than by any single dominant pathway.

This distinction between statistical significance and effect size is important. All five direct paths are statistically significant, but they do not contribute equally to explanatory power. The large f^2 for how Leadership Agility is affecting Strategic Agility indicates a substantively strong capability-building relationship, whereas the small f^2 values for the three predictors of Company Performance indicate that performance is more appropriately understood as a cumulative outcome of several factors.

Therefore, the interpretation of the model should not rely solely on p-values; the combined reading of β , f^2 , and R^2 provides a more complete assessment of the model's substantive meaning.

4.5.4. Predictive Relevance (Q^2) and Out of Sample Predictive Power

Table 4.11 Predictive Relevance (Q^2) and PLS Predict Results

Construct	Q^2 (Blindfolding)	Interpretation	Q^2_{predict} (PLSpredict)	PLS- SEM vs. LM
Strategic Agility	0.166	Medium	0.288	Valid
Organizational Agility	0.114	Small	0.186	Valid
Company Performance	0.224	Medium	0.218	Valid

All Q^2 values obtained through blindfolding are greater than zero (0.114 - 0.224), confirming that the model possesses satisfactory predictive relevance for each endogenous construct (Hair et al., 2022, p.197). This is corroborated by the PLSpredict procedure, which evaluates out of sample predictive power: all Q^2_{predict} values are likewise positive (0.186 - 0.288), and the PLS-SEM model's prediction error (RMSE/MAE) was lower than that of a naive linear benchmark model for the majority of indicators, indicating that the model has genuine predictive, not merely explanatory capability.

4.5.5. Integrated Assessment of Explanatory and Predictive Capability

The explanatory and predictive statistics provide complementary information and should be interpreted together. R^2 evaluates the proportion of variance explained within the sample, f^2 evaluates each predictor's incremental contribution to the relevant endogenous construct, Q^2 from blindfolding evaluates predictive relevance, and PLSpredict provides an out of sample oriented assessment. No single statistic is sufficient to establish overall model quality. The combined pattern is therefore more informative than interpreting any one criterion in isolation.

For Strategic Agility, $R^2 = 0.311$ indicates that Leadership Agility explains almost one-third of the observed variation, while $f^2 = 0.452$ indicates a large incremental effect. $Q^2 = 0.166$ and $Q^2_{\text{predict}} = 0.288$ are both positive. Together these results identify Strategic Agility as the endogenous construct for which Leadership Agility has the clearest substantive explanatory role. This aligns with the subsequent

hypothesis result, where the effect of Leadership Agility on Strategic Agility is the strongest structural path in the model.

For Organizational Agility, $R^2 = 0.207$ is lower, even though the effect size of Leadership Agility on Organizational Agility is medium ($f^2 = 0.260$). The positive $Q^2 = 0.114$ and $Q^2_{\text{predict}} = 0.186$ indicate that the model retains predictive relevance, but the lower explanatory power shows that organizational execution capability depends on a broader set of determinants than Leadership Agility alone. This reinforces the interpretation that systems, structure, technology, workforce capability, information quality, and operational coordination may represent important omitted determinants for future research.

For Company Performance, $R^2 = 0.460$ is the largest endogenous R^2 in the model. The individual f^2 values of the three predictors are small, yet the joint explanatory power approaches the moderate benchmark and $Q^2 = 0.224$ is positive. This pattern is consistent with a cumulative model in which no single agility construct dominates Company Performance, but Leadership Agility, Strategic Agility, and Organizational Agility together provide meaningful explanatory and predictive value.

The PLSpredict results should also be interpreted conservatively. Positive Q^2_{predict} values indicate that the model has predictive relevance relative to a naive benchmark, while the reported comparison of PLS-SEM prediction errors with the linear-model benchmark provides supporting evidence of out of sample predictive capability. These statistics complement the explanatory model; they do not transform the cross-sectional design into a forecasting study or establish causal prediction over time.

Table 4.12 Integrated Structural Model Assessment

Endogenous Construct	R^2	Key f^2 Evidence	Q^2	Q^2_{predict}	Integrated Reading
Strategic Agility	0.311	LA $\rightarrow$ SA = 0.452 (large)	0.166	0.288	Strongest capability-building evidence

Endogenous Construct	R ²	Key f ² Evidence	Q ²	Q ² predict	Integrated Reading
Organizational Agility	0.207	LA → OA = 0.260 (medium)	0.114	0.186	Meaningful but broader determinants remain
Company Performance	0.460	All individual predictor f ² values small	0.224	0.218	Cumulative explanatory and predictive relevance

The integrated assessment supports a coherent interpretation of the model: Leadership Agility is most influential in building Strategic Agility; it also contributes meaningfully to Organizational Agility; and Company Performance emerges from the combined contribution of the three agility constructs. This hierarchy provides a statistical bridge between the structural model diagnostics and the hypothesis-specific discussion in Sections 4.6 and 4.7.

4.6. Hypothesis Testing Results

Hypotheses H1–H5 were tested using standard path-coefficient bootstrapping with 5,000 resamples, considered significant when the p-value is below 0.05. Hypotheses H6 and H7 (mediation) were tested using specific indirect effect analysis, following the same significance criterion, consistent with the procedure of Zhao, Lynch, and Chen (2010) referenced in Section 3.13.

4.6.1. Direct Effects (H1–H5)

Table 4.13 Hypothesis Testing Results - Direct Effects

Hyp.	Path	β	T-Stat	P-Value	Decision
H1	Leadership Agility → Strategic Agility	0.558	9.179	0.000	Supported
H2	Leadership Agility → Organizational Agility	0.455	7.552	0.000	Supported
H3	Strategic Agility → Company Performance	0.304	3.542	0.000	Supported
H4	Organizational Agility → Company Performance	0.315	4.576	0.000	Supported

Hyp.	Path	β	T-Stat	P-Value	Decision
H5	Leadership Agility → Company Performance	0.173	2.278	0.023	Supported

Source: Research data processed using SmartPLS 4.1 Bootstrapping, 5,000 resamples (2026)

All five direct effect hypotheses are statistically supported. Leadership Agility shows its strongest influence on Strategic Agility ($\beta = 0.558$, $p < 0.001$), followed by Organizational Agility ($\beta = 0.455$, $p < 0.001$). Organizational Agility ($\beta = 0.315$, $p < 0.001$) and Strategic Agility ($\beta = 0.304$, $p < 0.001$) each exert a comparably moderate positive effect on Company Performance, while the direct effect of Leadership Agility on Company Performance, though significant, is the weakest of the five paths ($\beta = 0.173$, $p = 0.023$).



Figure 4.7 Bootstrapping Results: Path Significance (P-Values)

Figure 4.7 displays the SmartPLS bootstrapping output showing p-values for each structural path, based on 5,000 resamples. Consistent with Table 4.13, four of the five direct paths, namely Leadership Agility influencing Strategic Agility, Leadership Agility influencing Organizational Agility, Strategic Agility

influencing Company Performance, and Organizational Agility influencing Company Performance, show a p-value of 0.000 ($p < 0.001$), confirming very strong statistical significance.

The direct path from Leadership Agility to Company Performance shows a p-value of 0.023, which remains significant at the 5% level but is visibly weaker than the other four paths, reinforcing the earlier finding that this direct effect, while real, is the least strongly supported of the five hypothesized relationships.

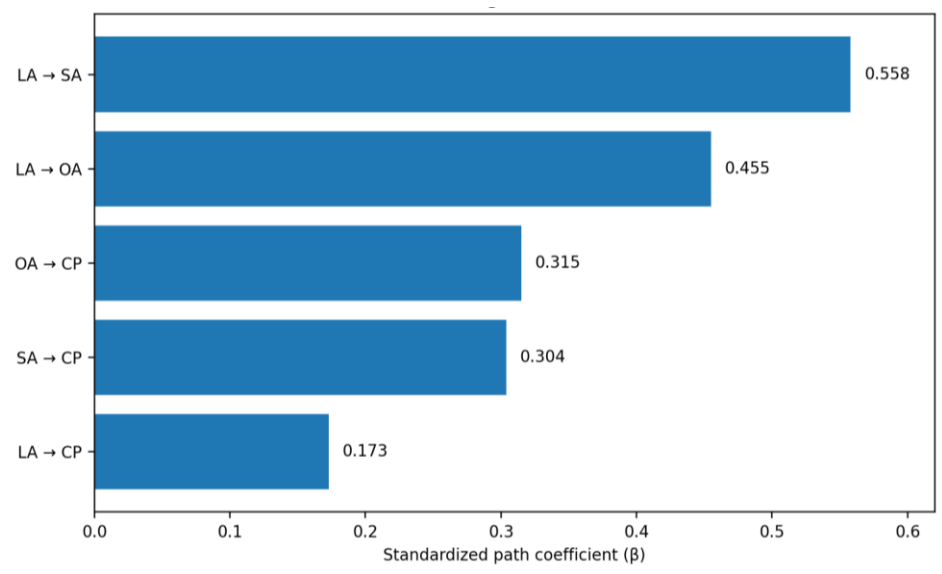


Figure 4.8 Relative Strength of Direct Path Coefficients

The coefficient ranking highlights two distinct layers in the model. The first layer concerns capability formation: the effects of Leadership Agility on Strategic Agility (0.558) and of Leadership Agility on Organizational Agility (0.455) are the two strongest paths. The second layer concerns performance conversion: the effects of Organizational Agility on Company Performance (0.315) and of Strategic Agility on Company Performance (0.304) are similar in magnitude, while the direct effect of Leadership Agility on Company Performance (0.173) is smaller.

This pattern supports an interpretation in which leadership capability is particularly influential upstream, by shaping the strategic and organizational capabilities through which performance is subsequently generated.

4.6.2. Mediation Effects (H6–H7)

Table 4.14 Hypothesis Testing Results - Mediation (Specific Indirect Effects)

Hyp.	Indirect Path	β	T-Stat	P-Value	Decision
H6	Leadership Agility → Strategic Agility → Company Performance	0.169	3.315	0.001	Supported
H7	Leadership Agility → Organizational Agility → Company Performance	0.143	3.854	0.000	Supported

Source: Research data processed using SmartPLS 4.1 Bootstrapping, 5,000 resamples (2026)

Both mediation hypotheses are supported: Strategic Agility significantly mediates the effect of Leadership Agility on Company Performance ($\beta = 0.169$, $p = 0.001$), and Organizational Agility significantly mediates the same relationship ($\beta = 0.143$, $p < 0.001$).

Because the direct effect (H5: $\beta = 0.173$, $p = 0.023$) remains statistically significant even after accounting for both mediating pathways, and because both the direct and indirect effects are positive in sign, the mediation observed is classified as complementary (partial) mediation following the typology of Zhao, Lynch, and Chen (2010). Strategic Agility and Organizational Agility each carry part of Leadership Agility's total effect on Company Performance, while a meaningful direct effect also remains.

This indicates that leadership agility improves company performance both through building organizational-level capabilities and through other channels not captured by the two mediators.

Table 4.15 Decomposition of Leadership Agility Effects on Company Performance

Effect Component	Path	β	Share of Total Effect
Direct Effect	Leadership Agility → Company Performance	0.173	35.7%
Specific Indirect Effect	Leadership Agility → Strategic Agility → Company Performance	0.169	34.8%

Effect Component	Path	β	Share of Total Effect
Specific Indirect Effect	Leadership Agility → Organizational Agility → Company Performance	0.143	29.5%
Total Indirect Effect	Via Strategic Agility + Organizational Agility	0.312	64.3%
Total Effect	Direct Effect + Total Indirect Effect	0.485	100.0%

Note: Total indirect effect = 0.169 + 0.143 = 0.312; total effect = 0.173 + 0.312 = 0.485. Shares are calculated from the reported rounded coefficients and may differ marginally from SmartPLS Total Effects output due to rounding.

Effect decomposition provides additional insight into how Leadership Agility influences Company Performance. The direct effect of Leadership Agility on Company Performance is 0.173, while the two specific indirect effects through Strategic Agility (0.169) and Organizational Agility (0.143) yield a combined total indirect effect of 0.312. Accordingly, the total effect of Leadership Agility on Company Performance is 0.485, comprising approximately 35.7% direct effect and 64.3% indirect effect through the two mediating pathways.

So, in terms of coefficient magnitude, the combined indirect effect is greater than the direct effect, indicating that Leadership Agility predominantly translates into Company Performance through the development of Strategic Agility and Organizational Agility rather than through the direct pathway alone. This comparison is descriptive and does not constitute a statistical test of the difference between the direct and total indirect effects.

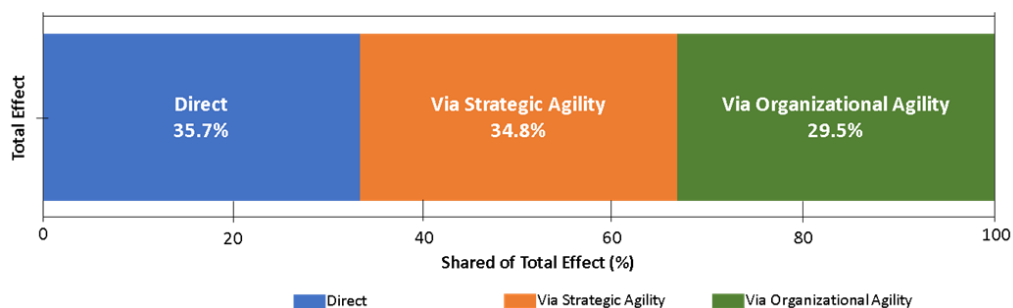


Figure 4.9 Decomposition of Leadership Agility Total Effect on Company Performance

The decomposition can also be read as a portfolio of three positive mechanisms. Approximately 35.7% of the reported total effect magnitude is associated with the direct pathway, 34.8% with the pathway through Strategic Agility, and 29.5% with the pathway through Organizational Agility. No single pathway completely dominates the total effect.

Instead, the result shows that leadership's relationship with performance is distributed across a direct route and two complementary organizational mechanisms. This is consistent with complementary partial mediation and reinforces the value of examining the full model rather than interpreting H5, H6, or H7 in isolation.

4.6.3. Summary of Hypothesis Testing

Table 4.16 Summary of All Hypothesis Testing Results

Hyp.	Statement	Decision
H1	Leadership Agility positively affects Strategic Agility.	Supported
H2	Leadership Agility positively affects Organizational Agility.	Supported
H3	Strategic Agility positively affects Company Performance.	Supported
H4	Organizational Agility positively affects Company Performance.	Supported
H5	Leadership Agility positively affects Company Performance.	Supported
H6	Strategic Agility mediates the effect of Leadership Agility on Company Performance.	Supported
H7	Organizational Agility mediates the effect of Leadership Agility on Company Performance.	Supported

All seven hypotheses proposed in Chapter II are empirically supported, indicating that the full parallel-mediation model, Leadership Agility affecting Company Performance both directly and indirectly through Strategic Agility and Organizational Agility holds within PT XYZ 's operational context.

4.7. Discussion

Each hypothesis result is discussed below against the theoretical foundation set out in Chapter II and the research gap identified in Section 1.2.

4.7.1. H1: Leadership Agility positively affects Strategic Agility

The strong, significant effect of Leadership Agility on Strategic Agility ($\beta = 0.558$, the largest coefficient in the entire model, with a large effect size of $f^2 = 0.452$) offers robust empirical support for Joiner's (2019) claim that leadership agility functions as the originating capability from which an organization's broader strategic responsiveness is built.

At PT XYZ, leaders who read complex regulatory and market shifts more accurately, engage stakeholders more effectively, and adapt their own approach appear to directly cultivate the strategic sensitivity, resource fluidity, and leadership unity that Doz and Kosonen (2010) identify as the meta-capabilities of strategic agility.

Being the strongest relationship anywhere in the model reinforces Joiner's (2019) positioning of leadership agility as central and originating, not merely one parallel input among several.

The size of this relationship also fits the nature of strategic agility itself: strategic sensitivity requires leaders to catch weak signals, question their own assumptions, and stay attentive to external developments; resource fluidity requires backing the shift of resources away from established allocations; and leadership unity requires collective commitment among decision makers.

All three mechanisms hinge on how leaders frame uncertainty, engage stakeholders, and revise their own thinking, which is why it makes sense that leadership capability shows a stronger relationship with Strategic Agility than with Company Performance directly. Strategy, after all, is the more immediate organizational capability through which leadership behavior gets translated into coordinated action.

That relationship carries practical weight at PT XYZ, where regulatory approvals, production quotas, environmental requirements, and market conditions can all upend the assumptions behind an operating plan. An agile leadership response is not just about deciding faster; it means helping the organization interpret the change, agree on what it means strategically, and redirect priorities and resources accordingly.

H1's result implies that leadership-development efforts deserve to be judged not only by individual behavior but by whether they lift the organization's collective strategic sensitivity, decision coherence, and capacity to redeploy resources.

It also helps separate Leadership Agility from the Leadership Unity dimension embedded within Strategic Agility. The measurement model confirms the two constructs are empirically distinct, even as H1 shows them to be closely related, leadership agility, in other words, can drive collective strategic unity without being the same thing as it.

That distinction strengthens the model's theoretical coherence and heads off a concern that the two concepts might simply be duplicating one another: leadership agility helps build unity, but it is not unity's mirror image, it is an influence that enables unity to emerge across the organization.

4.7.2. H2: Leadership Agility positively affects Organizational Agility

This finding speaks directly to the first research gap identified in Section 1.2. Prior studies on how Leadership Agility is influencing Organizational Agility produced flatly contradictory results even within similar Indonesian public-sector settings: Hat, Sunarto, and Nenobais (2025) found a significant direct effect, while Meilina (2024) found none.

The result at PT XYZ ($\beta = 0.455$, $p \leq 0.001$, medium effect size $f^2 = 0.260$) sides with Hat et al. (2025) rather than Meilina (2024), and does so, critically, within an extractive/mining industry setting that had never previously been tested, exactly the gap this study set out to fill.

That suggests that in a high-volatility, operationally intensive environment such as nickel mining, where regulatory and market conditions can shift within a single fiscal year (Section 1.1), a leader's agility translates comparatively directly into organization-wide responsiveness, competency, flexibility, and speed (Sharifi & Zhang, 1999), rather than needing an intervening cultural mechanism, as Meilina (2024) proposed for the public-sector context she studied.

The finding matters because Organizational Agility represents the organization's execution capacity. Leadership can identify a change correctly, but the performance

consequences still hinge on whether the organization can adjust its work processes, coordinate across functions, mobilize people and contractors, revise priorities, and keep moving without compromising safety or compliance. The medium effect size ($f^2 = 0.260$) shows Leadership Agility contributes meaningfully to that execution capability, though the R^2 of 0.207 confirms Organizational Agility is also shaped by factors this model does not capture.

That partial explanatory power is theoretically plausible, organizational agility is unlikely to depend on leadership behavior alone, but also on systems, technology, workforce capability, organizational structure, process standardization, information quality, and interdepartmental coordination. H2 should therefore not be read as saying agile leaders alone make an agile organization; leadership is better understood as a significant enabling factor that has to interact with the organization's infrastructure and operational capabilities.

The contrast between H1 and H2 is itself informative for PT XYZ: Leadership Agility exerts a larger effect on Strategic Agility (0.558) than on Organizational Agility (0.455), suggesting leadership shapes strategic sensing and decision alignment more readily than it reshapes organization-wide execution capability, consistent with the idea that responsiveness needs supporting systems beyond leadership alone. The practical implication is a balanced one: leadership development should be paired with improvements to process, structure, technology, and coordination if the organization is to become consistently agile.

4.7.3. H3: Strategic Agility positively affects Company Performance

The significant positive effect of Strategic Agility on Company Performance ($\beta = 0.304$, $p \leq 0.001$) backs Doz and Kosonen's (2010) argument that firms with stronger strategic sensitivity, resource fluidity, and leadership unity are better positioned to convert market awareness into performance outcomes. The effect size, though, is small ($f^2 = 0.078$), which echoes Tripathy and Lenka's (2024) observation that the strategic agility-performance relationship is highly contingent on contextual and environmental turbulence factors; within PT XYZ's single-firm setting, strategic agility contributes meaningfully without being the dominant driver of performance on its own.

The coefficient, then, is evidence that strategic agility matters, not proof that it determines performance independently. In an extractive industry, strategic decisions are ultimately bounded by operational realities: ore availability, equipment and contractor capacity, quality control, logistics, safety, environmental compliance, permitting, infrastructure, and market access. Strategic sensitivity can flag the need for change and resource fluidity can redirect priorities, but neither guarantees the performance benefit on its own.

That benefit materializes only once those decisions are translated into effective execution, an interpretation consistent with the small f^2 value. Statistical significance shows the relationship holds reliably in the sample, while the modest effect size shows Strategic Agility's unique contribution shrinks once Leadership Agility and Organizational Agility are accounted for at the same time.

None of this is a flaw in the model. It simply means Company Performance is a multi-determined outcome, with the three constructs contributing cumulatively rather than through any single overwhelming predictor. For management, the implication is that strategic agility initiatives need to be tied to execution disciplines.

Strategic sensing forums, scenario discussions, rapid reallocation processes, and leadership alignment mechanisms are far more likely to move performance when they connect to accountable operational follow-through, which is why the result favors integrating strategic planning with operating systems rather than treating strategic agility as a purely top-management exercise.

4.7.4. H4: Organizational Agility positively affects Company Performance

Organizational Agility significantly affects Company Performance ($\beta = 0.315$, $p \leq 0.001$), consistent with Sharifi and Zhang's (1999) argument that organizations stronger in responsiveness, competency, flexibility, and speed are better positioned to sustain performance under adverse or changing conditions, and with Asghar, Kanbach, and Kraus's (2025) more recent framing of organizational agility as a bundle of dynamic capabilities.

Notably, this is the strongest of the three predictors of Company Performance by path coefficient, suggesting that at PT XYZ, the capacity to respond quickly to

shifting production quotas, permit requirements, and environmental compliance obligations is a particularly consequential driver of performance, plausibly a reflection of how execution-oriented a mining firm's day-to-day performance really is.

The gap between Organizational Agility's effect (0.315) and Strategic Agility's effect (0.304) is small, and no formal coefficient-difference test was run, but the descriptive ranking still matters for how managers should read the results. It suggests the organization's ability to execute, adapt, and respond is at least as important as its ability to sense and adjust strategy.

That is especially plausible in mining, where strategy has to be realized through physical operations, coordinated contractors, technical controls, logistics, safety systems, and compliance activities.

The small f^2 value (0.097) again shows Organizational Agility does not explain performance on its own; it works alongside Strategic Agility and Leadership Agility. The result supports a systems view: performance emerges when leadership, strategic sensing, and organizational execution reinforce each other. A responsive organization without strategic direction may act fast but inconsistently, while a strong strategy without organizational agility can fail at implementation.

For PT XYZ, this strengthens the case for building cross-functional routines that shrink the gap between a change signal and operational action, clearer escalation mechanisms, faster cross-functional decision forums, flexible resource-allocation procedures, integrated operational data, and defined accountability for implementing strategic adjustments. These are organizational manifestations of agility, not just leadership training.

4.7.5. H5: Leadership Agility positively affects Company Performance (Direct Effect)

The direct effect of Leadership Agility on Company Performance is statistically significant ($\beta = 0.173$, $p = 0.023$), yet it is the weakest and smallest-effect-size ($f^2 = 0.038$) path in the model, a modest but real direct effect that, alongside two significant mediated pathways (H6, H7), suggests leadership agility's influence on

performance runs predominantly, though not exclusively, through the strategic and organizational capabilities it builds.

The effect decomposition sharpens that picture. Combined, the two significant mediated pathways carry a total indirect effect of 0.312, against a direct effect of 0.173, roughly 64.3% of Leadership Agility's total effect on Company Performance runs through Strategic Agility and Organizational Agility, and about 35.7% runs directly. Leadership Agility, in other words, contributes more to performance through the capabilities it builds than through the direct route alone.

This bears directly on why a parallel, rather than serial, mediation structure was chosen at the proposal stage: the direct path staying significant confirms that Leadership Agility's total effect cannot be fully accounted for by the two mediators alone, which is why H5 remains a distinct, non-redundant hypothesis within the parallel-mediation design.

A small direct effect is not the same as an unimportant one. That direct pathway may capture leadership influences on performance the two mediators do not, decision quality, stakeholder confidence, crisis handling, prioritization, communication, and similar mechanisms that shape outcomes without being fully captured by Strategic Agility or Organizational Agility. H5 staying significant shows leadership keeps an independent relationship with performance even once organizational capabilities are accounted for.

The decomposition also shifts where managerial attention should go. Looking at H5 alone might suggest leadership has a modest, if positive, relationship with performance; bringing H6 and H7 into the picture reveals a fuller mechanism, where most of the total effect travels through the capabilities leadership helps build. Leadership development, then, should be judged partly by downstream organizational outcomes, stronger strategic sensitivity, smoother resource flow, better cross-functional responsiveness, faster execution.

This also heads off a common misreading of mediation analysis: a significant direct effect does not invalidate mediation, and significant indirect effects do not require the direct path to vanish. Both exist here at once, which is exactly why the pattern is classified as complementary partial mediation rather than full mediation.

4.7.6. H6: Strategic Agility mediates the effect of Leadership Agility on Company Performance

The significant specific indirect effect ($\beta = 0.169$, $p = 0.001$) confirms Strategic Agility as a genuine mediating mechanism, extending Gulo, Purwoko, and Zulkifli's (2025) formal mediation-testing approach, previously applied only within Jakarta's restaurant industry, into a high-volatility, single-firm mining context, and addressing the second gap identified in Section 1.2.

Substantively, this means a meaningful share of how leadership agility turns into company performance at PT XYZ runs through leaders' ability to build the organization's strategic sensitivity, resource fluidity, and leadership unity.

The mediation works as a two-stage process: agile leadership first strengthens the organization's ability to sense strategic developments, align leadership, and redirect resources, and that stronger strategic capability then feeds into Company Performance. The indirect coefficient of 0.169 is not a rival to the H1 and H3 findings, it is the compounded pathway those two relationships create together.

This mechanism carries particular weight under regulatory uncertainty. When rules, quotas, or environmental requirements shift, leadership behavior can only lift performance if the organization correctly reads the strategic implications and adjusts its priorities accordingly, Strategic Agility is the mechanism that turns leadership awareness into a coordinated strategic response. That leadership capability matters partly because it changes how the organization senses and reallocates, not simply because individual leaders act more decisively, is exactly what this mediation result supports.

Worth noting, too: the indirect effect through Strategic Agility (0.169) sits close in magnitude to the direct effect (0.173), though the study does not test whether the two differ statistically. Their similarity nonetheless suggests the strategic pathway carries a substantial share of the overall leadership-performance relationship, reason enough to treat Strategic Agility as a central organizational capability rather than a secondary explanatory variable.

4.7.7. H7: Organizational Agility mediates the effect of Leadership Agility on Company Performance

The significant specific indirect effect ($\beta = 0.143$, $p \leq 0.001$) confirms that Organizational Agility functions as a mediating mechanism too, extending into the extractive/mining context the mediation-testing evidence that Section 1.2 identified as a gap, previously demonstrated only by Gulo et al. (2025) in the restaurant sector and Restiani et al. (2025) in the MSME sector.

Together with the H6 result, this shows PT XYZ's leaders drive company performance through two parallel, complementary channels, strategic sensing/deciding and organizational execution, alongside a smaller but still meaningful direct effect (H5), giving comprehensive support to the parallel-mediation model developed in Chapter II.

The effect decomposition sharpens the picture further. The total indirect effect through Strategic Agility and Organizational Agility, 0.312, exceeds the direct effect of 0.173 in magnitude; of the total effect of 0.485, roughly 64.3% is transmitted through the two mediating pathways and 35.7% remains direct.

That suggests Leadership Agility's primary role at PT XYZ is not simply to lift performance directly but to build the strategic and organizational capabilities through which performance improvements are later realized, a comparison of coefficient magnitude, it should be said, not a statistically tested difference between the direct and indirect effects.

The Organizational Agility pathway is a complementary but distinct mechanism from Strategic Agility: where the strategic path concerns sensing, resource reallocation, and leadership alignment, the organizational path concerns the capacity to respond, adapt, coordinate, and execute. The significant indirect coefficient of 0.143 shows leadership capability can lift performance by improving how well the organization turns decisions into timely operational responses.

That distinction matters especially for a mining company, where performance depends on both strategic decisions and operational execution. A regulatory change may call for strategic reinterpretation, but it also demands practical changes in mine planning, contractor deployment, quality control, environmental activities, and

logistics, Organizational Agility is the pathway through which leadership decisions become coordinated action across all of these functions.

H6 and H7 together support the parallel structure proposed in Chapter II. Neither mediator substitutes for the other: Strategic Agility captures the sensing-and-decision mechanism, Organizational Agility the response-and-execution mechanism, and their simultaneous significance shows leadership capability reaches Company Performance through multiple complementary channels rather than a single sequence.

4.8. Integrative Interpretation of the Research Model

Going through each hypothesis individually confirms that every proposed relationship is statistically supported, but the bigger payoff comes from reading the model as one integrated system. Together, the results reveal a consistent pattern: Leadership Agility is strongest upstream, in building organizational capabilities, while Company Performance is explained by the joint contribution of leadership, strategic, and organizational agility.

That pattern shifts the question from simply whether agile leadership improves performance to something more specific: how that influence actually travels through the organization.

Table 4.17 Integrated Research Findings

Key Finding	Statistical Evidence	Integrated Interpretation
Leadership primarily builds strategic capability	LA → SA $\beta = 0.558$; $f^2 = 0.452$	Strongest capability - building relationship in the model
Leadership also builds organizational responsiveness	LA → OA $\beta = 0.455$; $f^2 = 0.260$	Leadership is a meaningful enabler of execution agility
OA and SA both convert agility into performance	OA → CP $\beta = 0.315$; SA → CP $\beta = 0.304$	Execution and strategic sensing are complementary performance mechanisms
Direct leadership effect remains but is smaller	LA → CP $\beta = 0.173$; $f^2 = 0.038$	Leadership also influences performance through channels outside the two mediators

Key Finding	Statistical Evidence	Integrated Interpretation
Aggregate mediation carries larger magnitude	Total indirect = 0.312 (64.3%) vs direct = 0.173 (35.7%)	The model is best understood as capability-mediated leadership influence

The first integrated finding is that Leadership Agility behaves mainly as an enabling capability, its strongest relationships are not with performance directly, but with Strategic Agility and Organizational Agility. Agile leadership, in other words, creates value partly by shaping how the organization thinks, decides, reallocates, coordinates, and responds. This is consistent with Joiner's (2019) positioning of leadership agility as an originating capability, and adds empirical specificity by identifying the two organizational pathways through which that role plays out at PT XYZ.

The second integrated finding is that Strategic Agility and Organizational Agility should not be read as competing explanations. Their coefficients on Company Performance are similar, and both indirect pathways are significant, Strategic Agility represents the sensing-and-alignment side of adaptation, Organizational Agility the execution-and-response side, and the parallel model captures two capabilities performing different but complementary functions in converting leadership into performance.

The third integrated finding concerns the balance between direct and mediated influence. The direct effect stays significant, confirming leadership keeps an independent relationship with Company Performance, even as the combined magnitude of the two indirect pathways exceeds the direct one. This does not establish that the indirect effect is statistically larger, no contrast test was specified, but it does offer a descriptive decomposition of the total effect, and the substantive implication still stands: capability building is central to understanding the leadership-performance relationship in this model.

The fourth integrated finding is that the model's explanatory power is meaningful but incomplete. An R^2 of 0.460 for Company Performance means Leadership Agility, Strategic Agility, and Organizational Agility together explain 46.0% of the variance in the endogenous performance construct, substantial enough to

demonstrate the agility framework's relevance, while also showing that other variables beyond this model still shape performance. That balance matters for managerial interpretation, since it keeps the results from being overstated as a complete explanation of company performance.

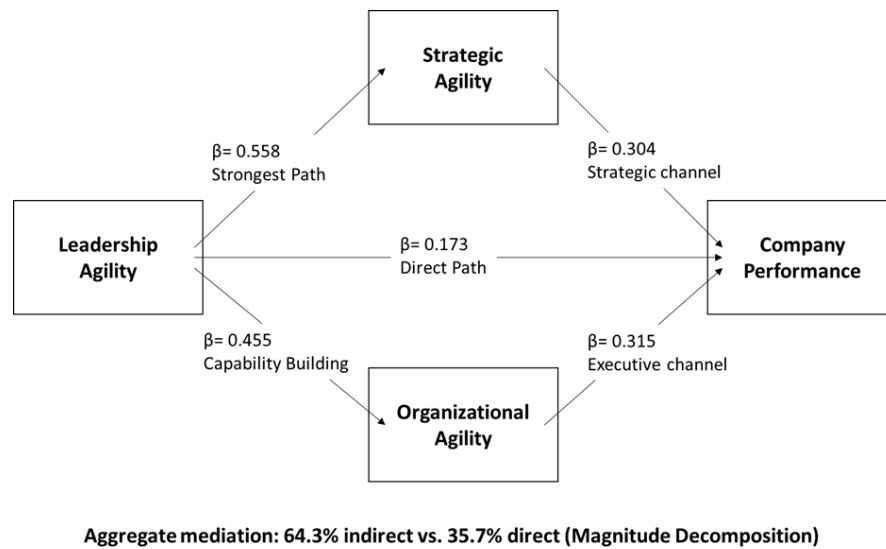


Figure 4.10 Integrated Interpretation of the Research Model

Figure 4.10 draws the research story together in a single visual: Leadership Agility carries the strongest upstream relationship with Strategic Agility, followed by Organizational Agility, and both agility capabilities go on to contribute to Company Performance alongside a smaller but still significant direct leadership pathway. The integrated evidence, taken as a whole, supports a Leadership-to-Capability-to-Performance logic rather than a purely direct Leadership-Performance model.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5. Conclusions and Recommendations

5.1. Conclusions

This study examined the effect of Leadership Agility on Company Performance through the parallel mediation of Strategic Agility and Organizational Agility, within PT XYZ, a nickel mining firm operating under Indonesia's high volatility regulatory environment. Based on the analysis of 207 valid responses using PLS-SEM, all seven hypotheses were supported. The following conclusions are drawn for each research question posed in Chapter I:

RQ1 (H1) Leadership Agility has a strong, positive, and significant effect on Strategic Agility ($\beta = 0.558$), the strongest relationship identified in the model, confirming leadership agility's role as the originating capability for strategic responsiveness at PT XYZ.

RQ2 (H2) Leadership Agility has a positive and significant effect on Organizational Agility ($\beta = 0.455$). This resolves, for the PT XYZ context, the contradiction identified in the literature between Hat et al. (2025) and Meilina (2024): the relationship is significant and direct within this extractive-industry setting.

RQ3 (H3) Strategic Agility has a positive and significant, though comparatively modest, effect on Company Performance ($\beta = 0.304$).

RQ4 (H4) Organizational Agility has a positive and significant effect on Company Performance ($\beta = 0.315$), the strongest of the three direct predictors of performance.

RQ5 (H5) Leadership Agility has a positive and significant, but comparatively small, direct effect on Company Performance ($\beta = 0.173$), indicating that most of its influence operates through the two mediators rather than directly.

RQ6 (H6) Strategic Agility significantly mediates the effect of Leadership Agility on Company Performance ($\beta = 0.169$), extending formal mediation testing evidence into a mining industry context for the first time.

RQ7 (H7) Organizational Agility significantly mediates the effect of Leadership Agility on Company Performance ($\beta = 0.143$), providing a second, complementary confirmed mediation pathway.

Taken together, these findings confirm that Leadership Agility drives Company Performance at PT XYZ both directly and indirectly, with the indirect pathways through Strategic Agility and Organizational Agility together carrying a substantial share of leadership agility's total effect, a pattern of complementary partial mediation (Zhao, Lynch, & Chen, 2010).

More specifically, the combined indirect effect of Leadership Agility on Company Performance through Strategic Agility and Organizational Agility is 0.312, which is larger in magnitude than the direct effect of 0.173. Based on the reported coefficients, the two indirect pathways account for approximately 64.3% of the total effect (0.485), while the direct pathway accounts for approximately 35.7%.

This decomposition reinforces the complementary partial-mediation interpretation: Leadership Agility contributes to Company Performance both directly and, to a greater aggregate magnitude, through the strategic and organizational capabilities it helps build. These percentages describe the decomposition of the estimated total effect and should not be interpreted as variance explained in Company Performance or as a statistical test that the indirect effect is significantly larger than the direct effect.

5.2. Theoretical Implications

This study makes two concrete theoretical contributions, corresponding directly to the two gaps identified in Section 1.2. First, by finding a significant, positive direct effect of Leadership Agility on Organizational Agility within PT XYZ, a nickel mining firm, this study extends the contradictory Indonesian public sector evidence (Hat et al., 2025 vs. Meilina, 2024) into a previously untested extractive industry setting.

The finding supports the position that leadership agility translates relatively directly into organizational agility in high-volatility operational environments,

without necessarily requiring an intervening organizational culture mechanism as proposed by Meilina (2024) in a public sector context.

Second, by formally testing and confirming both H6 and H7 as significant specific indirect effects, this study extends the mediation testing approach previously applied by Gulo, Purwoko, and Zulkifli (2025) in the restaurant industry and Restiani et al. (2025) in the MSME sector into a high volatility, single firm mining context, adding sector specific evidence to a body of agility mediation literature still dominated by service, retail, and small enterprise settings.

The complementary partial mediation pattern identified here (both direct and indirect effects significant) further nuances the theoretical understanding of how leadership agility operates: rather than being fully channeled through organizational level mechanisms, a meaningful portion of leadership agility's effect on performance remains direct and unmediated by the two capabilities tested.

A third theoretical implication arises from the decomposition of the Leadership Agility total effect. The combined indirect magnitude through Strategic Agility and Organizational Agility (0.312) exceeds the direct magnitude (0.173), indicating that the empirical value of Leadership Agility is better understood as capability enabling than as a stand alone direct predictor of performance. This does not replace the mediation hypothesis tests and does not claim a statistically significant difference between the coefficients; instead, it refines the theoretical interpretation of the supported parallel mediation model.

The study also contributes by clarifying the distinction between individual level leadership capability and collective strategic capability. Leadership Agility and Strategic Agility are empirically distinguishable in the measurement model, yet the strong effect of Leadership Agility on Strategic Agility shows that they are closely connected in the structural model.

This supports a layered interpretation in which agile leaders contribute to, but are not equivalent to, strategic sensitivity, resource fluidity, and leadership unity at the organizational level.

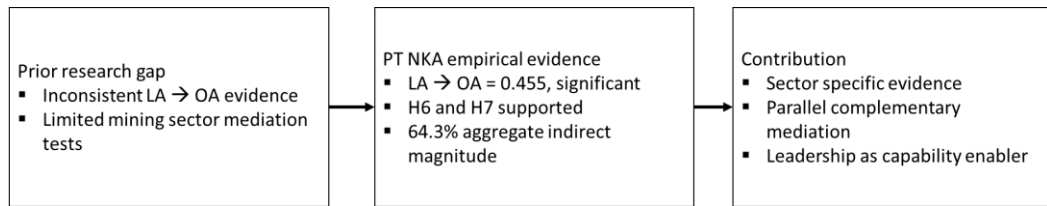


Figure 5.1 Theoretical Contribution of the Study

Figure 5.1 positions the contribution as a progression from research gap to empirical evidence to theoretical implication. The study does not claim a universal law for the mining sector; rather, it adds context-specific evidence from a single high volatility nickel mining organization and demonstrates that a parallel complementary mediation structure is empirically supported within that setting.

5.3. Managerial/Practical Implications

For PT XYZ's management, these findings offer clear, evidence based guidance on where to prioritize investment. Because Leadership Agility exerts by far its strongest effect on Strategic Agility ($\beta = 0.558$, large effect size), and Strategic and Organizational Agility together explain the largest share of variance in Company Performance, leadership development programs represent a high leverage investment.

Programs that strengthen context setting, stakeholder engagement, and adaptive decision-making capabilities (Joiner & Josephs, 2007) are likely to generate broader benefits. Improvements in Leadership Agility are likely to cascade into both strategic and organizational capability gains, which in turn drive Company Performance.

Meanwhile, because Organizational Agility shows the strongest direct effect on Company Performance among the three predictors ($\beta = 0.315$), PT XYZ should not rely on leadership development alone; parallel investment in organizational system responsiveness, flexibility, and speed, for example, streamlining internal processes for reacting to regulatory changes, production quota adjustments, and environmental compliance requirements, is equally warranted.

This supports a dual investment strategy: developing agile leaders while simultaneously building the organizational systems and structures that allow those leaders' agility to be converted into faster, more flexible operational execution.

This finding may be of practical value to human resource and organizational development practitioners across Indonesia's wider nickel mining sector, who face similar exposure to regulatory volatility, price fluctuation, and shifting environmental requirements (Rahmaditio et al., 2026), by providing evidence based guidance on how to allocate resources between leadership training and organizational system investment.

5.3.1. Managerial Priority 1: Develop Leadership as a Capability Builder

The first managerial priority is to treat Leadership Agility development as a mechanism for building organizational capabilities rather than as an isolated competency program. Because the effect of Leadership Agility on Strategic Agility is the strongest relationship in the model and its effect on Organizational Agility is the second strongest, leadership development activities should be connected to observable changes in strategic and organizational processes. Development objectives can therefore include improved strategic dialogue, faster interpretation of regulatory signals, more candid cross functional discussion, greater willingness to challenge assumptions, and more effective stakeholder engagement.

This orientation implies that leadership development evaluation should extend beyond participant satisfaction or individual competency scores. Management can assess whether leadership interventions are followed by faster strategic decisions, clearer resource reallocation, stronger alignment among functions, or reduced time between the identification of a change and implementation of a response. Such indicators would connect the empirical model more directly to managerial practice.

5.3.2. Managerial Priority 2: Institutionalize Strategic Agility

The second priority is to institutionalize Strategic Agility through repeatable management routines. The strong H1 coefficient indicates that leadership can shape strategic agility, but sustaining that capability requires mechanisms that do not depend solely on individual leaders.

PT XYZ can strengthen strategic sensitivity through structured environmental scanning and early warning discussions, leadership unity through cross-functional decision forums, and resource fluidity through clearer processes for reprioritizing people, budget, equipment, and management attention when conditions change.

The objective is not to replace formal planning with constant change. Strategic agility requires the ability to revise assumptions when justified while maintaining governance and accountability. In a regulated mining environment, this balance is essential: fast adaptation must remain consistent with legal, safety, environmental, and corporate requirements.

5.3.3. Managerial Priority 3: Strengthen Organizational Execution Agility

The third priority is to strengthen the execution mechanisms represented by Organizational Agility. Because OA has the strongest direct coefficient to Company Performance among the three predictors, management should focus on how quickly the organization can convert decisions into coordinated operational action.

Potential areas include clearer escalation paths, cross functional response teams, integrated operational information, standardized but flexible decision rights, faster contractor coordination, and defined protocols for reallocating resources when operating conditions change.

Organizational agility should not be interpreted as reducing controls. In mining, responsiveness must coexist with technical discipline, safety, environmental compliance, quality requirements, and governance. The relevant managerial objective is therefore controlled adaptability: the organization should be able to change direction or priorities quickly while preserving the control standards necessary for safe and compliant operations.

5.3.4. Managerial Priority 4: Manage the Leadership to Performance Chain as a System

The final priority is to manage leadership, strategy, organization, and performance as an integrated chain. The effect decomposition shows why this is important. Leadership Agility has a direct relationship with performance, but the aggregate mediated magnitude is larger. Investment in leadership capability is therefore more

likely to produce sustained performance benefits when strategic and organizational systems are capable of absorbing and translating that leadership input into decisions and execution.

For PT XYZ, this suggests a practical sequence: develop agile leadership behaviors; institutionalize strategic sensitivity, leadership unity, and resource fluidity; strengthen organizational responsiveness, flexibility, competency, and speed; and then connect these capabilities to performance measures. The sequence does not imply a serial statistical model, this research tested parallel mediators, but provides a managerial implementation logic for building the capabilities simultaneously and linking them to organizational outcomes.

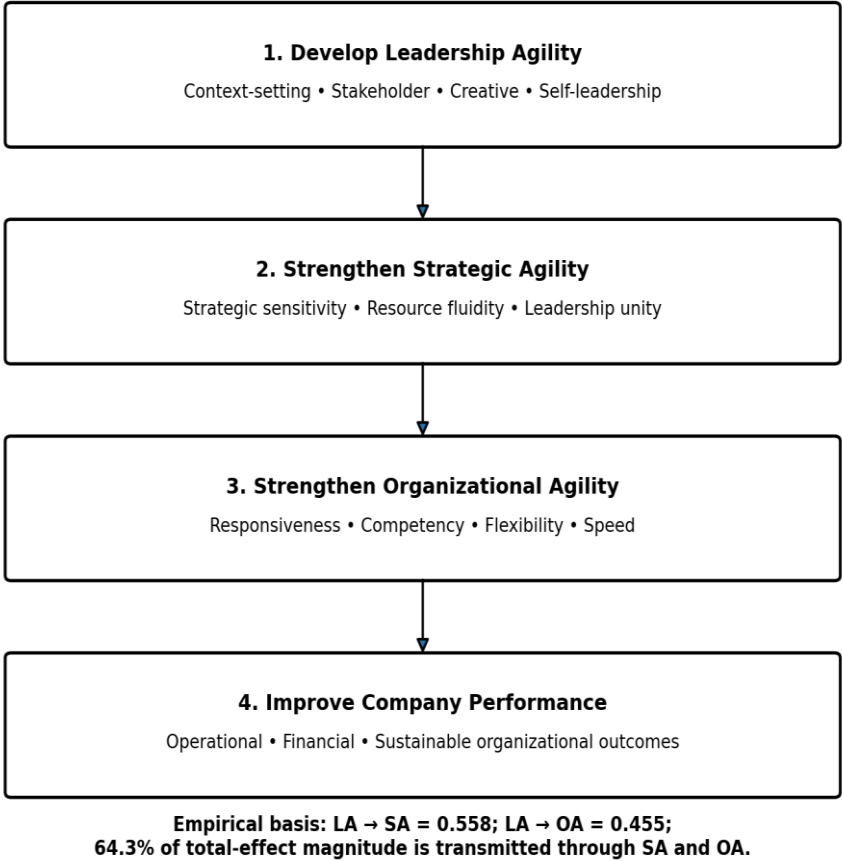


Figure 5.2 PT XYZ Leadership to Performance Agility Framework

Table 5.1 Managerial Action Priority Matrix

Priority	Empirical Basis	Recommended Management Focus	Expected Organizational Outcome
1. Leadership capability	LA $\rightarrow$ SA = 0.558; LA $\rightarrow$ OA = 0.455	Context setting, stakeholder agility, creative agility, reflective leadership	Stronger strategic and organizational agility
2. Strategic agility	SA $\rightarrow$ CP = 0.304	Strategic sensing, leadership alignment, rapid resource reprioritization	Faster and more coherent strategic response
3. Organizational agility	OA $\rightarrow$ CP = 0.315	Cross functional response, flexible processes, decision rights, execution speed	Improved conversion of decisions into operating results
4. Integrated system	64.3% aggregate indirect magnitude	Link leadership development to capability and performance indicators	Sustained leadership to performance mechanism

The action matrix translates the statistical model into management priorities while retaining the boundaries of the research. The recommended actions are implications derived from the observed relationships, not additional causal effects tested by the PLS-SEM model. Their purpose is to show how the empirical findings can inform management attention and capability-development priorities at PT XYZ.

5.3.5. Suggested Managerial Implementation Roadmap

The statistical model identifies where management attention can be prioritized, but implementation requires sequencing. A practical roadmap can be organized into four phases over an indicative twelve-month cycle. The roadmap is not tested as part of the PLS-SEM model and should therefore be treated as a managerial translation of the findings rather than as an additional empirical result. Its purpose is to connect the strongest observed relationships with a structured capability building process.

The first phase emphasizes baseline alignment: defining the leadership agility behaviors expected at PT XYZ, establishing the strategic signals that must be monitored, and identifying the cross functional processes in which response speed is most critical. The second phase focuses on strengthening leadership routines and strategic-agility mechanisms. The third phase translates these changes into organizational execution routines, while the fourth phase evaluates whether improvements in agility are reflected in organizational and performance indicators.

Table 5.2 Suggested 12 Month Managerial Implementation Roadmap

Phase	Indicative Timing	Primary Focus	Key Activities	Expected Output
1. Baseline & Alignment	Months 1 - 3	Leadership and agility baseline	Define target leadership behaviors Map critical regulatory/operational signals Identify response bottlenecks Establish baseline indicators	Agility baseline and priority improvement areas
2. Strategic Agility Build	Months 4 - 6	Strategic sensitivity, unity, resource fluidity	Scenario review Cross functional strategic dialogue Decision escalation Resource reprioritization protocols	Faster strategic sensing and aligned decisions
3. Organizational Agility Build	Months 7 - 9	Responsiveness and execution	Cross functional response routines Flexible decision rights Integrated information Contractor/operational coordination	Reduced response time and improved execution consistency
4. Performance Integration	Months 10–12	Link capability to performance	Review agility indicators against operational and corporate outcomes Identify gaps Institutionalize effective routines	Agility-performance review and next cycle priorities

The roadmap deliberately links leadership-development activities to organizational routines rather than treating leadership training as a stand-alone intervention. This reflects the effect decomposition result: the value of Leadership Agility is largely expressed through Strategic Agility and Organizational Agility. Management should therefore look for evidence that leadership initiatives are changing how the organization senses, decides, reallocates, coordinates, and executes.

5.3.6. Suggested Monitoring Indicators

A second practical implication is the need for monitoring indicators that reflect the capability chain identified by the research. Traditional performance KPIs remain necessary, but they can be complemented by leading indicators of agility. Leading indicators help management assess whether the strategic and organizational mechanisms are improving before final performance outcomes are fully visible.

The indicators below are illustrative management measures derived from the constructs and findings in this study. They are not validated measurement items and should not be substituted for the research questionnaire. Their role is to translate the academic constructs into operational monitoring concepts that PT XYZ can refine according to its governance system and data availability.

Table 5.3 Suggested Agility Monitoring Indicators for PT XYZ

Capability Area	Illustrative Management Indicator	Purpose	Link to Finding
Leadership Agility	Completion of leadership agility development actions Quality/timeliness of escalation decisions Stakeholder resolution cycle time	Track whether leaders demonstrate adaptive, stakeholder oriented decision behavior	LA → SA = 0.558; LA → OA = 0.455
Strategic Agility	Time from external signal to strategic decision Percentage of major assumptions reviewed Time to approve resource reprioritization	Track strategic sensitivity, unity, and resource fluidity	SA → CP = 0.304; H6 supported

Capability Area	Illustrative Management Indicator	Purpose	Link to Finding
Organizational Agility	Time from decision to operational implementation Cross functional issue closure time Percentage of priority actions completed on schedule	Track responsiveness, flexibility, and execution speed	OA $\rightarrow$ CP = 0.315; H7 supported
Company Performance	Production/sales attainment, cost efficiency, safety/environmental outcomes, project delivery, other approved corporate KPIs	Track final organizational outcomes using verified company measures	R ² CP = 0.460
Integrated mechanism	Percentage of strategic actions translated into cross functional implementation plans Periodic agility to performance review	Ensure leadership, strategy, execution, and performance are reviewed as one system	64.3% aggregate indirect magnitude

The monitoring approach creates a practical distinction between capability indicators and outcome indicators. Leadership Agility, Strategic Agility, and Organizational Agility function as upstream capabilities, while Company Performance represents the downstream outcome construct. Monitoring both levels would help management identify whether a performance problem is associated with weak leadership sensing, slow strategic alignment, limited organizational execution, or factors outside the agility model.

The proposed indicators should be refined through PT XYZ's existing performance-management and governance processes. Targets should be based on historical baselines, operational requirements, and management judgment rather than inferred directly from the PLS-SEM coefficients. The coefficients indicate relationship strength in the research model; they do not prescribe numerical KPI targets for the company.

5.4. Limitations

This study is subject to several limitations. First, the single-firm design (Yin, 2018), while offering contextual depth, limits the generalizability of findings beyond PT XYZ to other mining firms.

5.4.1. Single-Firm and Context-Specific Design

The single-firm design provides a controlled organizational context in which respondents share the same corporate environment, regulatory exposure, leadership structure, and broad operating setting. This strengthens contextual interpretation but limits external generalizability.

The coefficients identified in PT XYZ should therefore not be assumed to apply with the same magnitude in other nickel companies, other commodities, or industries with different regulatory and operating characteristics. The principal value of the findings is analytical transferability: the results provide evidence of how the proposed agility mechanism operates within one bounded high-volatility mining context.

This limitation is particularly relevant to the mediation results. The 64.3% aggregate indirect share is a decomposition of coefficients estimated in this sample, not an industry benchmark. Replication across multiple mining firms would be required before arguing that indirect capability-mediated leadership effects systematically dominate direct leadership effects across the sector.

Second, the cross sectional design captures perceptions at a single point in time and cannot establish definitive causal ordering among constructs.

5.4.2. Cross-Sectional Timing and Causal Interpretation

The cross-sectional design measures all constructs during one survey period. PLS-SEM estimates directional relationships based on the theoretical model, but temporal precedence is not directly observed. Accordingly, phrases such as “affects” and “drives” are used in the context of the hypothesized structural model and should not be interpreted as definitive proof of longitudinal causality. It remains possible that higher performing organizational conditions reinforce perceptions of agility, or that reciprocal relationships develop over time.

A longitudinal design could strengthen causal interpretation by measuring Leadership Agility first, changes in Strategic and Organizational Agility in subsequent periods, and Company Performance later. Such sequencing would allow future research to test whether leadership changes precede capability development and whether capability changes precede performance outcomes.

Third, all constructs were measured via self report perceptual survey items, which may be subject to common method bias.

5.4.3. Perceptual Measures and Common Method Considerations

Because the predictor, mediator, and outcome constructs were collected from the same respondents using the same survey instrument, common method variance may inflate some observed associations. The anonymity of responses and the use of established measurement constructs reduce but do not eliminate this possibility. In addition, Company Performance is represented by employees' perceptions rather than by audited financial statements, verified production records, or independently measured operational KPIs.

Future studies can strengthen measurement triangulation by combining employee survey data with objective indicators such as production attainment, sales volume, unit cost, safety performance, environmental compliance, project completion, or other verified corporate performance measures. Multi source measurement could test whether the structural relationships remain similar when the outcome construct is assessed independently from the predictors.

Fourth, the R^2 values obtained for the three endogenous constructs (0.207 - 0.460) indicate that a substantial share of variance in Strategic Agility, Organizational Agility, and particularly Company Performance is explained by factors outside the tested model, suggesting that other antecedents beyond leadership agility, such as external market conditions, technology, or workforce characteristics, also play a meaningful role.

5.4.4. Model Parsimony and Omitted Determinants

The R^2 values demonstrate that the model is meaningful but intentionally parsimonious. Company Performance has $R^2 = 0.460$, while Strategic Agility and

Organizational Agility have R^2 values of 0.311 and 0.207. These values show that important explanatory factors remain outside the model. Potential variables include organizational culture, digital capability, workforce capability, operational excellence, environmental turbulence, regulatory uncertainty, technology, organizational structure, contractor capability, and resource availability.

The omission of these variables is not necessarily a design flaw because the study was developed to answer a specific set of seven research questions concerning Leadership Agility and two parallel agility mediators. Adding many constructs would increase model complexity and shift the research objective. Nevertheless, the unexplained variance establishes a clear boundary on interpretation and provides a logical agenda for model extension in future studies.

Fifth, one indicator of the Leadership Agility construct (LA1, Context Setting Agility) was eliminated during the measurement-model purification process due to a low outer loading, meaning the final Leadership Agility construct in this study is represented by four rather than five of the originally hypothesized dimensions from Joiner and Josephs (2007), a scope limitation that should be considered when interpreting the Leadership Agility results.

5.4.5. Measurement-Model Refinement

The elimination of LA1 improved convergent validity but also means that the final Leadership Agility construct is represented by four rather than five indicators. The decision was statistically and conceptually justified in the measurement-model evaluation, yet it reduces the direct representation of the Context Setting Agility item in the final structural analysis. This limitation should be considered when comparing the construct with studies that use a different Leadership Agility scale or retain a broader set of indicators.

Future instrument development should revisit the wording and contextual relevance of the Context-Setting Agility item. A refined item may better capture how leaders interpret complex mining, regulatory, and stakeholder conditions without introducing ambiguity or overlap with Strategic Agility. Pilot testing across different employee levels could also help determine whether the item is interpreted consistently throughout the organization.

Table 5.4 Research Limitations and Implications

Limitation	Implication for Interpretation	Recommended Future Response
Single-firm PT XYZ design	Do not generalize coefficients as sector wide benchmarks	Replicate across multiple mining firms and commodities
Cross-sectional survey	Temporal causality cannot be established definitively	Use longitudinal or time-lagged designs
Self-report perceptual measures	Potential common method bias; CP is perceptual	Combine survey constructs with objective KPI data
Moderate/weak R ² values	Important determinants remain outside the model	Test selected moderators, antecedents, and controls
LA1 indicator eliminated	Leadership Agility final construct has reduced item coverage	Refine and revalidate Context-Setting Agility measurement

Taken together, these limitations define the scope within which the conclusions should be read. They do not invalidate the supported hypotheses; instead, they identify the boundaries of generalization, causal inference, measurement, and explanatory completeness. Explicitly recognizing these boundaries strengthens the academic defensibility of the study and provides a direct basis for the future-research agenda.

5.5. Recommendations for Future Research

Future research could extend this study in several directions. First, as discussed in response to the question of serial versus parallel mediation raised during the proposal defense, future studies could test a serial mediation model in which Leadership Agility is affecting Strategic Agility, which in turn is affecting Organizational Agility, which in turn is affecting Company Performance, to examine whether strategic sensing precedes organizational execution, rather than the parallel structure tested here.

5.5.1. Extend the Mediation Architecture

Future studies can compare the present parallel specification with theoretically justified serial or moderated-mediation alternatives. For example, Leadership

Agility may first shape Strategic Agility, which could then facilitate Organizational Agility before influencing Company Performance. Such a serial model should be developed prospectively from theory rather than selected solely because the current coefficients suggest a possible sequence.

Moderation is another extension. Environmental turbulence, regulatory uncertainty, organizational culture, or digital maturity may strengthen or weaken particular agility relationships. This would help explain why previous studies report inconsistent findings on how Leadership Agility is influencing Organizational Agility and how Strategic Agility is influencing performance across contexts.

Second, a longitudinal design could help establish the temporal and causal ordering among leadership, strategic, and organizational agility, and clarify whether the complementary partial mediation pattern observed here remains stable over time.

5.5.2. Use Longitudinal and Multi-Source Designs

A time-lagged study can measure leadership capability, agility development, and performance at different points in time. This design would be particularly valuable when PT XYZ experiences major regulatory, production, organizational, or investment transitions because it would allow researchers to observe whether agility capabilities change before and after significant external events.

Multi source research should also incorporate objective operational and financial data. Combining survey based agility measures with production, cost, sales, safety, environmental, or project delivery indicators would provide a stronger test of whether employee perceptions of agility are associated with independently verified performance outcomes.

Third, replicating this model across multiple nickel mining firms in Indonesia would strengthen the generalizability of the findings beyond the single firm context of PT XYZ.

5.5.3. Replicate Across Organizations and Employee Groups

Multi-company replication would permit stronger assessment of external validity and enable comparison across ownership structures, mine maturity, regulatory

exposure, production scale, or geographic region. A larger multi firm sample could also support multi group analysis to test whether structural relationships differ across organizational categories.

Within individual organizations, future studies could compare managerial and non-managerial respondents, permanent and contract employees, or operational and support functions. Such comparisons should be designed with adequate subgroup sample sizes and measurement-invariance assessment so that observed coefficient differences can be interpreted rigorously.

Fourth, future studies could revisit the Context Setting Agility dimension of Leadership Agility (LA1) with refined item wording, given that this indicator was eliminated in the present study due to low measurement reliability, to determine whether the dimension itself lacks relevance in this context or whether the measurement approach requires improvement.

5.5.4. Refine Measurement and Add Selected Explanatory Variables

Measurement refinement should prioritize the Leadership Agility scale, particularly Context-Setting Agility, while preserving the theoretical distinction between Leadership Agility and Strategic Agility. Cognitive interviews and pilot testing can help identify whether item wording is interpreted differently by employees at different organizational levels or functions.

Model extension should remain theoretically selective. Rather than adding many variables simultaneously, future studies could test one or two carefully justified constructs that address the unexplained variance identified in the present model. Organizational culture, digital capability, operational excellence, regulatory uncertainty, and environmental turbulence are particularly relevant candidates because they are conceptually connected to the agility mechanisms and the operating context described in Chapter I.

Table 5.5 Proposed Future Research Agenda

Research Direction	Core Question	Suggested Method	Expected Contribution
Serial/alternative mediation	Does SA facilitate OA before performance?	PLS-SEM model comparison with prospective hypotheses	Clarify sequence of capability formation
Moderated relationships	When are agility effects stronger or weaker?	Moderation / moderated mediation	Explain context dependent findings
Longitudinal design	Do leadership changes precede capability and performance changes?	Time lagged survey and KPI tracking	Strengthen temporal causal inference
Multi-source performance	Do perceptual agility measures predict objective outcomes?	Survey + verified operational/financial KPIs	Reduce common method concerns
Multi-firm replication	Are coefficients stable across mining contexts?	Multi-company sample and multi-group analysis	Improve external validity
Measurement refinement	Can Context Setting Agility be measured more robustly?	Cognitive interviews, pilot testing, confirmatory validation	Improve construct coverage and comparability

The proposed agenda builds directly from the study's empirical findings and limitations. The highest-priority extensions are those that can clarify temporal ordering, reduce reliance on single source perceptual data, test generalizability beyond PT XYZ, and explain why agility relationships vary across organizational contexts. These directions would extend the current research without changing the contribution already established by the supported H1 - H7 model.

5.6. Overall Chapter Synthesis and Closing Interpretation

This closing synthesis draws together the study's empirical, theoretical, and managerial conclusions without introducing anything new. Across H1 through H7, the evidence consistently supports a model in which Leadership Agility carries value both as a direct predictor of Company Performance and, more significantly,

in aggregate magnitude, as an upstream capability that strengthens Strategic Agility and Organizational Agility, an interpretation consistent with the parallel-mediation structure set out in Chapter II and one that answers the research problem posed in Chapter I.

5.6.1. Synthesis of the Research Answers

The first major answer concerns Leadership Agility's own role. The effect of Leadership Agility on Strategic Agility ($\beta = 0.558$, $f^2 = 0.452$) is the strongest relationship anywhere in the model, and Leadership Agility also holds a positive, significant relationship with Organizational Agility ($\beta = 0.455$; $f^2 = 0.260$). Together, the two results say leadership capability matters most in forming organizational capabilities, not simply in its direct link to performance.

At PT XYZ, agile leadership appears to set the conditions through which the organization senses change, aligns decisions, reallocates resources, coordinates across functions, and adapts how it executes.

The second major answer concerns how the agility capabilities relate to Company Performance. Both Strategic Agility and Organizational Agility hold positive, significant direct relationships with it, coefficients of 0.304 and 0.315, close enough in magnitude that no formal contrast test was run to claim a statistical difference between them. Descriptively, though, both strategic sensing and organizational execution clearly matter: strategy without execution leaves decisions unrealized, while execution without strategic sensitivity risks fast but misaligned responses, which is why the findings favor reading the two capabilities as complementary rather than competing.

The third major answer concerns mediation. Strategic Agility significantly mediates how Leadership Agility is affecting Company Performance, with a specific indirect effect of 0.169, and Organizational Agility mediates the same relationship with an indirect effect of 0.143. Because the direct effect stays positive and significant (0.173), the overall pattern is complementary partial mediation, Leadership Agility keeps its own relationship with performance while also working through two organizational channels at once.

The effect decomposition deepens that reading. The combined indirect effect of 0.312 makes up roughly 64.3% of the total effect of 0.485, against about 35.7% for the direct effect of 0.173. These percentages describe how the estimated total effect breaks down; they are not variance explained, nor proof that the indirect effect is statistically larger than the direct one. What they do show is that, within this model, the mediated pathway carries more weight in magnitude than the direct pathway does.

5.6.2. Synthesis of Theoretical and Practical Contributions

The theoretical contribution runs in two directions. First, the study supplies sector-specific evidence from a high-volatility mining context for relationships, how Leadership Agility is influencing Organizational Agility chief among them, that prior research has reported inconsistently. Second, it shows that Strategic Agility and Organizational Agility can operate at once as parallel, complementary mediators between Leadership Agility and Company Performance.

That result supports a layered view of agility, in which leadership capability, strategic capability, and organizational execution capability are empirically distinct yet structurally connected.

The practical contribution follows from that same layered view. Leadership-development programs should not be designed or judged solely as improvements to individual behavior, their real value shows up in changes to strategic sensitivity, leadership alignment, resource fluidity, organizational responsiveness, cross-functional coordination, flexibility, and execution speed.

Put differently, the strongest managerial takeaway is not just to develop agile leaders, but to develop leaders who build agile organizational capabilities, a distinction that matters because the direct path from Leadership Agility to Company Performance is smaller than the two capability-building paths that run through it.

For PT XYZ, the roadmap and monitoring indicators in Section 5.3 turn this interpretation into a workable sequence without overstepping the study's limits: establish a baseline, strengthen Leadership Agility and Strategic Agility routines,

build Organizational Execution Agility, and then track capability indicators alongside the company's existing performance measures.

The statistical coefficients are meant to point management's attention toward relationships and priorities, not to be converted automatically into KPI targets. Operational targets still need management judgment, baseline data, governance approval, and alignment with the company's formal performance-management system.

5.6.3. Boundary of the Final Conclusions

The conclusions drawn here stay within the boundaries the study design allows. The research rests on a single company, cross-sectional data, and employee perceptions gathered through one survey instrument.

That means the findings offer strong evidence for the proposed structural relationships within PT XYZ, but they do not establish universal mining-industry coefficients or prove causality over time. The R^2 figures also confirm that important drivers of Strategic Agility, Organizational Agility, and Company Performance sit outside the model, a limitation that matches the study's deliberately narrow scope and points toward future work rather than casting doubt on the supported H1–H7 conclusions.

The most defensible overall reading, then, is that Leadership Agility functions as an important enabling capability within the PT XYZ context: it contributes directly to Company Performance, but its stronger empirical role shows up in how it builds Strategic Agility and Organizational Agility.

Those two capabilities, in turn, are the complementary mechanisms through which leadership gets translated into performance, which is why the research shifts the managerial question from whether agile leadership matters to how an organization can institutionalize the strategic and execution capabilities through which agile leadership creates value.

Table 5.6 Final Synthesis of Research Findings and Contributions

Research Dimension	Core Evidence	Final Interpretation
Leadership capability	LA → SA = 0.558; LA → OA = 0.455	Leadership Agility is strongest as an upstream capability builder
Performance conversion	SA → CP = 0.304; OA → CP = 0.315	Strategic sensing and organizational execution are complementary
Direct leadership effect	LA → CP = 0.173	A smaller but significant independent leadership-performance pathway remains
Parallel mediation	Indirect via SA = 0.169; via OA = 0.143	Both mediators carry part of the leadership-performance relationship
Effect decomposition	Total indirect = 0.312 (64.3%); direct = 0.173 (35.7%)	Aggregate mediated magnitude exceeds direct magnitude descriptively
Explanatory boundary	R ² CP = 0.460	Agility is meaningful but not a complete explanation of performance
Managerial message	Strongest paths are LA → SA and LA → OA	Develop leaders as builders of strategic and organizational capability

Table 5.6 pulls this integrated summary together, showing the findings holding consistent across the measurement model, the structural model, the hypothesis tests, the mediation analysis, and the managerial interpretation.

At its core, the contribution is a capability-based explanation of leadership's influence: Leadership Agility matters not just because leaders can affect outcomes directly, but because agile leadership strengthens the strategic and organizational capabilities through which performance actually gets realized.

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