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PHAN TRI TUẤN ANH

THE ROLE OF MANAGERIAL CHARACTERISTICS ON THE IMPACT OF CAPITAL STRUCTURE AND FIRM PERFORMANCE OF REAL ESTATE COMPANIES LISTED ON HO CHI MINH CITY STOCK EXCHANGE

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3. Tuan Anh Phan Tri, Trinh Bui Van, Liem Nguyen Thanh (2025). Capital Structure mediates the link between CEO Age and Firm Performance: A Formative Modeling Approach. *Review of Finance, Vol.7(Issue 2),* 75-77.

4. Phan Tri Tuan Anh, Bui Van Trinh, Nguyen Thanh Liem (2025). Exploring the moderating effect of CEO Age on Capital structure and Firm performance: A Formative Model Approach. *Review of Finance, Vol.7(Issue 3), 116-119.*

International Conference Proceedings: Published papers are available, but they are not related to this dissertation.

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THE ROLE OF MANAGERIAL CHARACTERISTICS ON THE IMPACT OF CAPITAL STRUCTURE AND FIRM PERFORMANCE OF REAL ESTATE COMPANIES LISTED ON HO CHI MINH CITY STOCK EXCHANGE

ABSTRACT

This dissertation examines the role of managerial characteristics on the impact of capital structure and firm performance of real estate companies listed on Ho Chi Minh City Stock Exchange. Employing a mixed-methods research design, the study analyzes data from 82 companies across all four quarters of 2023 using Partial Least Squares Structural Equation Modeling (PLS-SEM). The key findings of this study are as follows: (i) CEO age has a negative effect on capital structure but a positive effect on firm performance, and it also demonstrates both a positive partial mediating effect to performance and a negative moderating effect on the relationship between capital structure and performance; (ii) CEO duality positively moderates the relationship between capital structure and firm performance; (iii) Capital structure exerts a negative influence on firm performance; and (iv) Firm growth, asset utilization, and firm size have positive impacts on firm performance. Managerial implications are: (i) limit appointing over-aged CEOs due to potential declines in capital efficiency and performance; (ii) encourage CEOs to serve concurrently as Chairmen to leverage positive moderating effects; (iii) establish optimal capital structures to mitigate debt impacts; (iv) exploit economies of scale and improve resource use; (v) increase asset turnover, especially in smaller firms; and (vi) invest in growth initiatives to enhance performance and competitiveness. Policy implications for Stakeholders are: (i) assess firms by considering the interplay between capital structure, CEO traits, and performance before investment or lending decisions; (ii) factor in CEO age and dual roles in executive appointments and credit evaluations; (iii) prioritize firms with efficient asset use and clear growth strategies. Policymakers should develop criteria to monitor executives of listed firms. Limitations include

a limited sample and focus on the real estate sector. Future studies should explore additional executive characteristics and extend analysis to other industries. Despite these constraints, the dissertation fulfills its objectives, contributes novel insights on moderating effects, and has narrowed the research gap in this area.

Keywords: Capital Structure, CEO Characteristics, Firm Performance, Formative Modeling, PLS-SEM.

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Chapter 1
INTRODUCTION

1.1 RATIONALE FOR THE RESERACH

The Vietnamese real estate market has undergone significant fluctuations in recent years. Many companies that once achieved impressive growth are now facing financial crises, with sharp declines in revenue and profit. In practice, a number of real estate firms, despite their strong past growth, have collapsed rapidly due to inappropriate capital structure choices or ineffective managerial decisions made by CEOs and top executives. The real estate industry is characterized by its cyclical nature and heavy reliance on borrowed capital, while strategic financial decisions are often considerably influenced by the competencies and personal attributes of the leadership team. From this reality arises an urgent need for research to clarify the relationship between capital structure, managerial characteristics, and firm performance of real estate companies in the current Vietnamese context.

However, previous domestic studies have mainly examined pairs of factors in isolation, such as the relationship between capital structure and firm performance, between CEO characteristics and capital structure, or between CEO characteristics and firm performance. Very few studies have simultaneously analyzed the interrelationship among all three factors: capital structure, CEO characteristics, and firm performance (Naseem et al., 2020; Supriyanto & Kho, 2022). Moreover, the findings of these studies remain inconclusive regarding the mediating effect of capital structure. At the time of conducting this dissertation, no research in Vietnam has simultaneously analyzed these three factors, particularly within the real estate sector. This reveals an urgent need to address this research gap.

In this context, undertaking the dissertation titled “The role of managerial characteristics on the impact of capital structure and firm

performance of real estate companies listed on Ho Chi Minh City Stock Exchange" is imperative, carrying both theoretical and practical significance for the Vietnamese real estate industry.

1.2 RESEARCH OBJECTIVES

1.2.1 General objective

The primary objective of this dissertation is to explore the role of chief executive officer (CEO) characteristics in the relationship between capital structure and firm performance of real estate companies listed on the Ho Chi Minh City Stock Exchange. Specifically, the research examines the direct effects of capital structure on firm performance, the mediating role of capital structure, and the moderating role of CEO characteristics within this relationship. Based on the empirical findings, the study proposes managerial implications to enhance firm performance in the real estate sector, while also providing robust scientific evidence to support policy formulation and decision-making processes among relevant stakeholders.

1.2.2 Specific objectives

To achieve the overarching research objective, this dissertation specifies four particular objectives as follows:

(1) To identify the CEO characteristics that influence both capital structure and firm performance of real estate companies listed on the Ho Chi Minh City Stock Exchange;

(2) To examine the direct impact of CEO characteristics on firm performance, and to test the mediating role of capital structure in the relationship between CEO characteristics and firm performance;

(3) To investigate the direct effect of capital structure on firm performance, and to assess the moderating role of CEO characteristics in the relationship between capital structure and firm performance;

(4) To propose managerial implications aimed at enhancing firm performance in real estate companies, and to provide a sound scientific

basis to support policy formulation and decision-making processes among relevant stakeholders.

1.3 RESEARCH QUESTIONS

To achieve the specific research objectives stated above, this dissertation seeks to answer the following research questions:

(1) Which managerial (CEO) characteristics influence the capital structure and firm performance of real estate companies listed on the Ho Chi Minh City Stock Exchange?

(2) How do CEO characteristics affect firm performance through both direct effects and the mediating mechanism of capital structure, and what is the magnitude of these direct and indirect effects?

(3) To what extent does capital structure directly impact firm performance, and how do CEO characteristics moderate the relationship between capital structure and firm performance in terms of strength and direction?

(4) Based on the research findings, what managerial implications can be proposed for real estate companies listed on the Ho Chi Minh City Stock Exchange and the relevant stakeholders?

1.4 SCOPE OF THE DISSERTATION

1.4.1 Research subject

The subject of this dissertation is the role of managerial characteristics in influencing the relationship between capital structure and firm performance of real estate companies listed on the Ho Chi Minh City Stock Exchange (HoSE).

1.4.2 Research observation

The research sample comprises real estate companies listed on the Ho Chi Minh City Stock Exchange, which constitute the population of interest in this study.

1.4.3 Scope of the research

a. Content scope

This dissertation focuses on seeking empirical evidence regarding the relationships, directions, and extent of the impact among managerial characteristics (chief executive officers), capital structure, and firm performance, based on data collected from the surveyed companies. On this basis, the study proposes managerial implications appropriate to the context of real estate companies in Vietnam.

b. Geographical scope

The research is limited to real estate companies listed on the Ho Chi Minh City Stock Exchange.

c. Time scope

The dataset covers four quarters of the year 2023 to ensure completeness, timeliness, and compliance with officially published and audited reports, thereby enhancing the reliability of the analysis. Using the dataset to a single year also eliminates variations in the sample size caused by CEO turnover across years, thus ensuring consistency and stability of the research data.

The dissertation is conducted over the period from August 2022 to August 2025.

1.5 RESEARCH METHODOLOGY

1.5.1 Sources of data

The data employed in this dissertation are obtained from officially published and publicly available reports of companies listed on the Vietnamese stock exchanges.

1.5.2 Research methods

This dissertation use a mixed-methods approach, applying a sequential exploratory design that integrates both qualitative and quantitative methods. The research is implemented in the following stages: Qualitative exploratory research – to identify and refine key variables, develop initial constructs, and provide contextual insights into

managerial characteristics, capital structure, and firm performance; Preliminary quantitative research – to validate the measurement scales and specify the conceptual model; Main quantitative research – to test the proposed research model and hypotheses using advanced statistical techniques. Partial Least Squares Structural Equation Modeling (PLS-SEM) is employed for data analysis, implemented through SmartPLS 4 software.

1.6 NOVEL CONTRIBUTIONS OF THE DISSERTATION

Theoretical contribution: This dissertation adopts a moderated mediation framework, which extends beyond the direct and indirect (mediated) effects examined in prior studies (Naseem et al., 2020; Supriyanto and Kho, 2022). Specifically, the study incorporates an exploratory analysis of the moderating effect (if any) of CEO characteristics on the relationship between capital structure and firm performance. By integrating mediation and moderation mechanisms within a unified framework, the research is expected to offer novel theoretical insights into the complex interplay among these constructs and enrich the existing literature.

Contributions in model variables: (i) New control variables: The study introduces two additional control variables compared to prior related studies, namely asset utilization (UTI) and firm growth (GROW), thereby improving model completeness and explanatory power; (ii) New measurement approaches: Firm performance (PFM): The study employs Return on Assets (ROA) and Return on Sales (ROS) as proxies for firm performance, in contrast to Tobin's Q used in previous studies; CEO characteristics (CEO): The model is extended by incorporating CEO ownership as an additional explanatory variable; Capital structure (CSV): The study introduces additional measures, including Debt-to-Equity Ratio (DER), Short-term Debt to Total Assets (SDA), and Long-term Debt to Total Assets (LDA); Asset utilization (UTI) (new): Measured using Tangible Assets to Total Assets (TAS), Fixed Assets to Total Assets

(FTA), and Total Asset Turnover (TAT); Firm growth (GROW) (new): Measured using Total Asset Growth (ASG) and Fixed Asset Growth (FAG).

1.7 SIGNIFICANCE OF THE RESEARCH

1.7.1 Theoretical Contributions

This dissertation contributes to and extends existing theoretical frameworks in several respects: (i) It provides new insights that help narrow the academic gap regarding the moderating role of CEO characteristics in the relationship between capital structure and firm performance; (ii) It addresses both industry- and geography-specific gaps by focusing on the real estate sector in an emerging market context; (iii) It applies a moderated mediation model that simultaneously captures both mediating and moderating effects, thereby offering a more comprehensive analytical framework compared to prior studies; (iv) It incorporates two additional control variables, namely asset utilization (UTI) and firm growth (GROW), to enhance model completeness; (v) It Proposes new measurement proxies for key constructs, thereby enriching the operationalization of variables in the literature; (vi) It provides empirical evidence supporting the Upper Echelons Theory, offers an extended perspective on Agency Theory in a specific contextual setting, and further reinforces the arguments of Stewardship Theory.

1.7.2 Methodological Contributions

The dissertation have methodological contributions, particularly in the context of emerging research practices in Vietnam: (i) It employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to test a moderated mediation model, incorporating formative measurement constructs that include both continuous and binary variables; (ii) It applies formative measurement model evaluation procedures following the approaches of Hafiz Hanafiah (2020) and Hair et al. (2017); (iii) It adopts the seven-step analytical framework proposed by Andersson

et al. (2014) and the six-step framework developed by Vu Huu Thanh and Nguyen Minh Ha (2023) to formulate and justify hypotheses related to moderating effects.

1.7.3 Practical Contributions

The findings provide scientific evidence and practical insights with important managerial implications for real estate firms: (i) They support strategic decision-making in human resource planning and capital structure design, particularly in the selection and development of top executives aligned with firm objectives; (ii) They offer a practical analytical framework that can be applied by firms to enhance decision-making quality and improve business performance, especially within the real estate industry. Furthermore, the study provides a valuable reference for stakeholders such as investors, regulators, and analysts in assessing firm risk, evaluating managerial capability, and establishing criteria for monitoring CEO characteristics and corporate capital structure.

1.8 STRUCTURE OF THE DISSERTAION

The dissertation is organized into five chapters as follows:

Chapter 1: Introduction

Chapter 2: Literature Review and Research Model

Chapter 3: Research Methodology

Chapter 4: Research Results and Discussion

Chapter 5: Conclusions and Implications

Chapter 2
LITERATURE REVIEW AND RESEARCH MODEL

2.1 CONCEPTS RELATED TO THE RESEARCH SUBJECT

2.1.1 Firm performance

Firm performance is a concept that reflects the profitability and overall effectiveness of real estate companies. In the literature, firm performance is commonly measured through several financial indicators. The most widely employed measures include: Return on Assets (ROA) (Abor, 2007; Ahmed et al., 2018; Ahmed Sheikh & Wang, 2013; Alfisah et al., 2022; Amal et al., 2012; Assenga et al., 2018; Buyl et al., 2011; Darmadi, 2013; Debnath et al., 2021; Elsayed, 2007; Gupta & Mahakud, 2020; Lam & Lee, 2008; Liargovas & Skandalis, 2008; Nguyen Thu Hien et al., 2016; Park et al., 2018; Sajid Nazir et al., 2012a; Ting et al., 2015); Return on Equity (ROE) (Ahmed et al., 2018; Alfisah et al., 2022; Assenga et al., 2018; Gupta & Mahakud, 2020; Lam & Lee, 2008); Return on Sales (ROS) (Liargovas & Skandalis, 2008); and Tobin's Q ratio (Kho & Yazar Soyadı, 2022; Mokhtar et al., 2023; Naseem et al., 2020; Vintila & Gherghina, 2012; Zeitun & Gang Tian, 2007).

2.1.2 Managerial characteristics

2.1.2.1 Concept of managerial leader

In this study, the managerial leader under investigation refer to the Chief Executive Officers (CEOs) of real estate companies listed on the Ho Chi Minh City Stock Exchange (HoSE), Vietnam.

2.1.2.2 Managerial Characteristics

Managerial characteristics in this study are defined as the personal characteristics of CEOs, encompassing age, gender, experience, education, tenure, and founder status (Neeraj Gupta & Mahakud, 2020; Ting et al., 2015). A review by Altarawneh et al. (2020) and De Silva & Weerakoon Banda (2021) indicates that the most commonly studied CEO characteristics include age, gender, tenure, education, ownership

(Elsayed, 2007), and dual roles such as chairmanship (Elsayed, 2007; Neeraj Gupta & Mahakud, 2020; Lam & Lee, 2008; Nazir et al., 2012; Nguyễn Thu Hiền et al., 2016; Song & Kang, 2019).

2.1.3 Capital Structure

There are various definitions of capital structure in the literature. According to Nguyen Thu Hien et al. (2016), capital structure, also referred to as financial leverage, is measured either by the market value or the book value of the ratio of debt to total assets of a firm. Boodhoo and Roshan (2009) define capital structure as the combination of debt and equity maintained by a company, and it is often interchangeably referred to as the financial structure of the firm. Furthermore, Chua et al. (2022) emphasize that in a modern corporation, the use of leverage or the choice of capital structure represents one of the strategic decisions aimed at maximizing firm value.

2.1.4 Firm Growth

Firm growth can be observed through several indicators as employed in prior studies. One common measure is the growth of net profit margin (NPM) (Andy & Megawati, 2019; Pokharel et al., 2020; Sukesti et al., 2021). Another widely used indicator is the growth rate of net sales revenue (Do Thi Van Trang, 2019; Ekadjaja et al., 2021; Lam & Lee, 2008; Zeitun & Tian, 2007). In addition, some studies measure growth by the Growth rate of fixed assets (Ahmed Sheikh & Wang, 2013). Ghazouani (2013), however, conceptualizes Growth in terms of Growth opportunities, which are captured through changes in tangible assets. Similarly, Ramli et al. (2020) adopt Growth opportunities as a proxy for firm growth, measured by the growth rate of total assets.

2.1.5 Asset Utilization

Asset utilization refers to the extent to which a firm's assets are capable of generating productive output relative to their actual use in operations. In empirical research, asset utilization is commonly measured through several indicators. These include the ratio of tangible assets to

total assets (Ahmed Sheikh & Wang, 2013), the ratio of fixed assets to total assets (Nazir et al., 2012; Quan Minh Nhut & Ly Thi Phuong Thao, 2014), and the asset utilization ratio, often expressed as net sales to total assets (Xu & Wanrapee, 2014).

2.1.6 Real estate companies and firm characteristics

2.1.6.1 Definition of real estate companies

In this study, real estate companies are defined as joint-stock companies engaged in real estate business in accordance with the Vietnamese Enterprise Law. This definition also includes diversified joint-stock companies whose primary line of business is real estate.

2.1.6.2 Characteristics of real estate companies listed on HoSE

For the purpose of this research, real estate companies are those joint-stock companies engaged in real estate activities under the Vietnamese Enterprise Law and listed on the Ho Chi Minh City Stock Exchange (HoSE), Vietnam (Quan Minh Nhựt & Lý Thị Phương Thảo, 2014). Firm characteristics are defined as research constructs measured by two indicators: Firm Size (FSIZE) – reflecting the scale of the company; Firm Age (FAGE) – indicating the length of time the company has been in operation.

2.2 THEORETICAL FOUNDATIONS

This study is grounded in several theoretical perspectives relevant to its research objectives. With respect to executive characteristics, the study draws on Upper Echelons Theory (UET) and Agency Theory. Regarding capital structure, the analysis is informed by Capital Structure Theory, including both the Trade-off Theory of Capital Structure and the Pecking Order Theory. Furthermore, in relation to firm-specific attributes such as growth and asset utilization, the study relies on the Economies of Scale Theory and the Resource-Based View (RBV).

2.3 THEORETICAL FRAMEWORK

This dissertation synthesizes relevant theoretical perspectives to develop a theoretical framework for the research model and hypotheses.

Specifically: The selected theories not only capture the key factors influencing capital structure and firm performance but also highlight the complex effects of CEO characteristics on these outcomes. Specifically, the theories are as follows:Upper Echelons Theory, Agency Theory, Stewardship Theory, Capital Structure Theory, Trade-off Theory of Capital Structure, Pecking Order Theory, Economies of Scale Theory, Resource-Based View. The theories play a central and complementary role in explaining the influence of CEO characteristics on managerial behavior and firm performance. These include Upper Echelons Theory, Agency Theory, and Stewardship Theory.

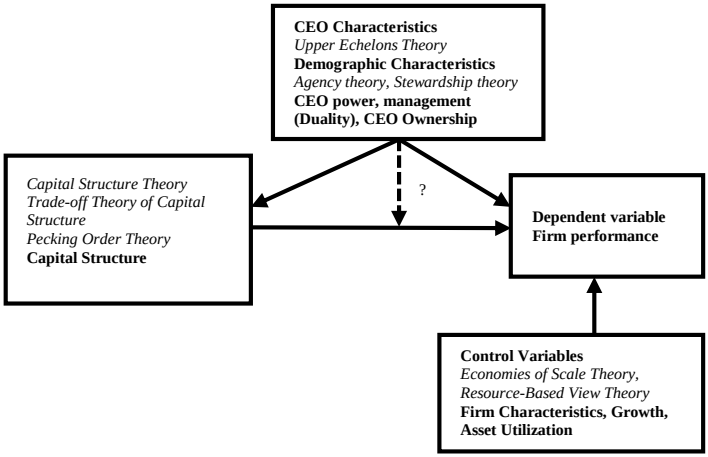

Figure 2.2: Theoretical framework of the research
Source: Author's review based on the literature.

2.4 REVIEW OF RELATED EMPIRICAL STUDIES

2.4.1 Review of prior studies

2.4.1.1 CEO characteristics and firm performance

Table 2.5 The impact of CEO characteristics on firm performance

Variable name	Variable type	Impact	Authors, year
CEO's Ownership ratio	Independent	+	Elsayed (2007)
CEO's Experience	Independent	+	Gupta & Mahakud (2020; Ting et al. (2015)

Variable name	Variable type	Impact	Authors, year
CEO's Age	Independent	–	Gupta & Mahakud (2020)
Gender (Female = 0, Male = 1)	Independent	+	Gupta & Mahakud (2020)
Education	Independent	+	Gupta & Mahakud (2020)
Duality	Independent	+	Elsayed (2007); Gupta & Mahakud (2020); Lam & Lee (2008)
	Moderating	+	Song & Kang (2019)
Tenure	Independent	+	Gupta & Mahakud (2020)

Source: Author's review based on the literature.

2.4.1.2 Đặc điểm giám đốc điều hành và cấu trúc vốn

Table 2.6: The impact of CEO characteristics on captital structure

Variable name	Variable type	Impact	Authors, year
Gender (Female = 0, Male = 1)	Independent	+	De Silva & Banda (2022); Nilmawati et al. (2021)
Education	Independent	+	Rakhmayil & Yuce (2009); Ting et al. (2015)
Duality	Independent	+	Kaur & Singh (2021); Sajid Nazir et al. (2012)
Tenure	Independent	+	Kaur & Singh (2021); Ting et al. (2015)
CEO's Ownership ratio	Independent	–	Butt & Hasan (2009); Kaur & Singh (2021)
CEO's Experience	Independent	–/+	Matemilola et al. (2018); Rakhmayil & Yuce (2009); Ting et al. (2015)
CEO's Age	Independent	–/+	De Silva & Banda (2022); Ting et al. (2015); Vintilă & Toader (2020)

Source: Author's review based on the literature.

2.4.1.3 Capital Structure and Firm Performance

Table 2.7 The impact of capital structure on firm performance

Variable name	Variable type	Impact	Authors, year
Total Debt / Equity	Independent	–	Abor (2007); Ahmed et al. (2018); Ahmed Sheikh & Wang (2013); Ekadjaja et al. (2021); Elsayed (2007)
	Independent	Insignificant	Quan Minh Nhựt & Lý Thị Phương Thảo (2014)
	Independent	+	Amal et al. (2012)
Total Debt / Total Asset	Independent	–	Xu & Wanrapee (2014)
Short-term Debt / Total Assets	Independent	Insignificant	Ahmed et al. (2018)
	Independent	–	Abor (2007); Ahmed Sheikh & Wang (2013); Elsayed (2007)
Long-term Debt / Total Assets	Independent	Insignificant	Ahmed et al. (2018)
	Independent	–	Abor (2007); Ahmed Sheikh & Wang (2013); Elsayed (2007)
Bank Debt / Total Debt	Independent	–	Quan Minh Nhựt & Lý Thị Phương Thảo (2014)

Source: Author's review based on the literature.

2.4.1.4 Growth and firm performance

Table 2.8 The impact of growth on firm performance

Variable name	Variable type	Impact	Authors, year
Fixed Assets Growth Rate	Independent	+	Ahmed Sheikh & Wang (2013)
Net Profit Margin (NPM)	Independent	+	Andy & Megawati (2019); Sukesti et al. (2021)
Ln (Net Sales)	Control, Independent	+/–	Abor (2007); Lam & Lee (2008)
Net Sales Growth Rate	Independent	+/–	Đỗ Thị Vân Trang (2019); Ekadjaja et al. (2021); Zeitun & Gang Tian (2007)
Net Sales Growth (Two Consecutive Years)	Independent	Insignificant	Nguyễn Hoàng Nam (2021)

Source: Author's review based on the literature.

2.4.1.5 Asset Utilization and Firm Performance

Table 2.9: The Impact of Asset Utilization on Firm Performance

Variable name	Variable type	Impact	Authors, year
Tangible Assets / Total Assets	Control	–	Ahmed Sheikh & Wang (2013)
Fixed Assets / Total Assets	Independent	–	Quan Minh Nhựt & Lý Thị Phương Thảo (2014)
Asset Utilization Ratio (TAT): Net Sales / Total Assets	Independent	+	Xu & Wanrapee (2014)

Source: Author's review based on the literature.

2.4.1.6 Firm characteristics and firm performance

Table 2.10: The Impact of Firm Characteristics on Firm Performance

Variable name	Variable type	Impact	Authors, year
Firm Size	Control	+/–	Abor (2007); Ahmed Sheikh & Wang (2013); Gupta & Mahakud (2020)
	Control	Insignificant	Elsayed (2007)
	Independent	+	Darmadi (2013)
Firm Age (Years of Operation)	Independent	Insignificant	Amal et al. (2012); Ekadjaja et al. (2021); Liargovas & Skandalis (2008)
	Independent	+	Quan Minh Nhựt & Lý Thị Phương Thảo (2014)
	Control	+	Gupta & Mahakud (2020)

Source: Author's review based on the literature.

2.4.1.7 Studies closely related to the dissertation topic

The literature review has identified two studies that directly examine the relationship among the three variables under consideration (Naseem et al., 2020; Supriyanto & Kho, 2022). However, the findings of the two studies are not consistent regarding the effects among the variables. In addition, the author identified an alternative perspective in the work of Mokhtar et al. (2023), which investigates the moderating

effect of "Board of Directors' characteristics" on the relationship between capital structure, and firm performance.

2.4.2 Synthesis of closely related studies

2.4.2.1 Variables employed in related studies

Table 2.12: Summary of Research Variables and Their Measurements

Research Variables and Measures	Variable Type	Sources
Firm Performance		
Tobin's Q	Dependent	Naseem et al. (2020); Supriyanto & Kho (2022); Mokhtar et al. (2023)
ROA	*Dependent*	*Not examined in prior studies*
ROS	*Dependent*	*Not examined in prior studies*
CEO Characteristics		
CEO duality (CEO as Board Chair)	Independent Control *Moderating*	Naseem et al. (2020) Mokhtar et al. (2023) *Not examined (moderation)*
Age	Independent *Moderating*	Naseem et al. (2020); Supriyanto & Kho (2022); *Not examined (moderation)*
CEO ownership	*Independent* *Moderating*	*Not examined in prior studies* *Not examined in prior studies*
Gender	Independent	Naseem et al. (2020); Supriyanto & Kho (2022)
Education	Independent	Naseem et al. (2020); Supriyanto & Kho (2022)
Tenure	Independent	Naseem et al. (2020); Supriyanto & Kho (2022)
Board independence	Moderating	Mokhtar et al. (2023)
Capital Structure		
Debt-to-Equity Ratio (DER)	Mediating	Naseem et al. (2020); Supriyanto & Kho (2022)
Total debt to total assets	Independent	Mokhtar et al. (2023)
Short-term debt to total assets (SDA)	*Mediating*	*Not examined in prior studies*
Long-term debt to total assets (LDA)	*Mediating*	*Not examined in prior studies*
Firm Characteristics		
Number of shares	Control	Naseem et al. (2020); Supriyanto & Kho (2022)
Firm size	Control	Naseem et al. (2020); Supriyanto & Kho (2022)
State ownership	Control	Naseem et al. (2020); Supriyanto & Kho (2022)
Blockholder ownership	Control	Mokhtar et al. (2023)
Board size	Control	Mokhtar et al. (2023)
Firm age	Control	Mokhtar et al. (2023)

Research Variables and Measures	Variable Type	Sources
Asset Utilization (New)		*Not examined in prior studies*
Tangible assets to total assets (TAS)	*Control*	*Not examined in prior studies*
Fixed assets to total assets (FTA)	*Control*	*Not examined in prior studies*
Total asset turnover (TAT)	*Control*	*Not examined in prior studies*
Growth		*Not examined in prior studies*
Revenue growth	Control	Mokhtar et al. (2023)
Total asset growth (ASG)	*Control*	*Not examined in prior studies*
Fixed asset growth (FAG)	*Control*	*Not examined in prior studies*
Cost		
Total expenses to total assets	Control	Naseem et al. (2020); Supriyanto & Kho (2022)

Source: Compiled and proposed by the author based on the reviewed studies.

Based on the synthesis of studies closely related to the research topic, several variables have not been previously examined and are therefore considered for inclusion in the proposed research model. These variables, summarized in Table 2.12, provide a foundation for extending the existing literature and developing a more comprehensive analytical framework for the dissertation.

2.4.2.2 Research context in related studies

Table 2.13: Research Context by Industry and Country

Context	Sources
Industry	
Non-financial sector	Mokhtar et al. (2023)
Manufacturing sector	Supriyanto & Kho (2022)
Multi-industry	Naseem et al. (2020)
Real estate sector	*Not examined in prior studies*
Country	
Malaysia	Mokhtar et al. (2023)
Indonesia	Supriyanto & Kho (2022)
Pakistan	Naseem et al. (2020)
Vietnam	*Not examined in prior studies*

Source: Compiled and proposed by the author based on the reviewed studies.

Existing studies by Naseem et al. (2020), Supriyanto and Kho (2022), and Mokhtar et al. (2023) have been conducted in international contexts and have not examined the real estate sector in Vietnam. Therefore, this dissertation addresses both geographical and industry research gaps by focusing on real estate firms in Vietnam.

2.4.2.3 Data analytical methods used in related studies

Table 2.14: Data and Analytical Methods

Data Type	Analytical Methods	Sources
Panel data	*PLS-SEM*	*Supriyanto & Kho (2022)*
Panel data	FEM, GMM	Naseem et al. (2020)
Panel data	POLS, REM, FEM	Mokhtar et al. (2023)

Source: Compiled by the author based on the reviewed studies.

Table 2.14 indicates that panel data are commonly employed in prior studies, with a variety of analytical techniques applied, including PLS-SEM, FEM, GMM, POLS, and REM. Among these, PLS-SEM has been utilized to analyze panel data, highlighting its applicability in examining complex relationships among constructs.

2.4.2.4 Theories used in related studies

Table 2.15: Summary of Theoretical Frameworks Used and Proposed

Theories	Explanation	Sources
Upper Echelons Theory	CEO characteristics	Naseem et al. (2020)
Agency Theory	CEO characteristics	Naseem et al. (2020); Supriyanto & Kho (2022); Mokhtar et al. (2023)
Stewardship Theory	CEO characteristics	Mokhtar et al. (2023)
Pecking Order Theory	Capital structure	Naseem et al. (2020); Supriyanto & Kho (2022); Mokhtar et al. (2023)
Capital Structure Theory	Capital structure	Mokhtar et al. (2023)
Trade-off Theory	Capital structure	Mokhtar et al. (2023)
Economies of Scale Theory	*Firm characteristics, asset utilization, growth*	*Not applied in prior studies*
Resource-Based View (RBV)	*Firm characteristics, asset utilization, growth*	*Not applied in prior studies*

Source: Compiled and proposed by the author based on the reviewed studies.

The theoretical gaps identified above represent missing components in the existing literature and provide a foundation for establishing the research gap, which is further discussed in Section 2.5 of this dissertation.

2.5 RESEARCH GAPS

Theoretical gaps: (i) Regarding the relationship among the three variables, this dissertation seeks to explore the moderating effect of CEO characteristics on the relationship between capital structure and firm performance; (ii) The study contributes additional measurement variables and new aspects of analysis, including: Capital Structure (Debt-to-Equity Ratio – DER, Short-term Debt-to-Total Assets – SDA, Long-term Debt-to-Total Assets – LDA); CEO Characteristics: further examining both the moderating and mediating effects of CEO Characteristics; and Firm Performance measured through ROA and ROS, which differ from the approaches of Naseem et al. (2020), and Supriyanto & Kho, (2022); (iii) The research introduces new control variables, Asset Utilization (UTI) and Growth (GROW).

Practical gaps: First, industry, no prior studies have been identified that examine the relationship among these three variables in the context of real estate firms. Second, geography, the author did not find any research has been conducted on this topic within the Vietnam.

2.6 CONCEPTUAL FRAMEWORK

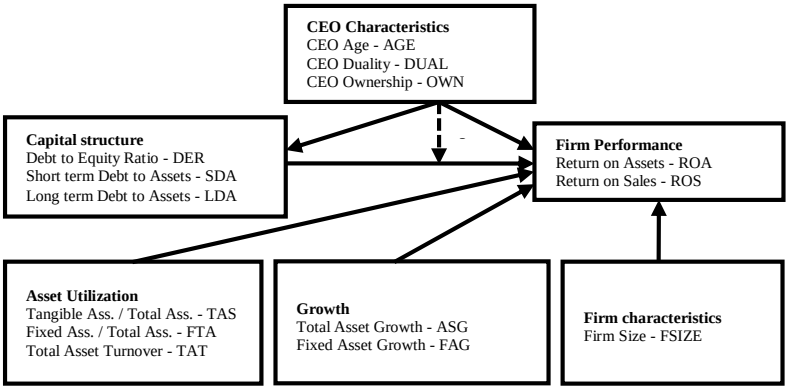

Figure 2.9: Conceptual framework of the research model
Source: Author's review based on the literature.

2.7 HYPOTHESES AND RESEARCH MODEL

2.7.1 Research Hypotheses

Hypothesis on Capital Structure

H_{CSV}*:* Capital structure (CSV) has a negative effect (–) on firm performance (FPM).

Hypotheses on CEO Age

H_{AGE1}: CEO age (AGE) has a negative effect (–) on capital structure (CSV);

H_{AGE2}: CEO age (AGE) has a positive effect (+) on firm performance (FPM);

H_{AGE3}: CEO age (AGE) positively (+) influences firm performance (FPM) through the mediating role of capital structure (CSV);

H_{AGE4}: CEO age (AGE) has a negative moderating effect (–), when AGE increases, it strengthens the negative (–) relationship between capital structure (CSV) and firm performance (FPM).

Hypotheses on CEO Duality

H_{DUAL1}: CEO duality (DUAL) has a positive effect (+) on capital structure (CSV);

H_{DUAL2}: CEO duality (DUAL) has a positive effect (+) on firm performance (FPM);

H_{DUAL3}: CEO duality (DUAL) positively (+) influences firm performance (FPM) through the mediating role of capital structure (CSV);

H_{DUAL4}: CEO duality (DUAL) has a positive moderating effect (+), when a CEO simultaneously holds the position of board chair, it weakens the negative (–) relationship between capital structure (CSV) and firm performance (FPM).

Hypotheses on CEO Ownership

H_{OWN1}: CEO ownership (OWN) has a negative effect (–) on capital structure (CSV).

H_{OWN2}: CEO ownership (OWN) has a positive effect (+) on firm performance (FPM);

H_{OWN3}: CEO ownership (OWN) positively (+) influences firm performance (FPM) through the mediating role of capital structure (CSV);

H_{OWN4}: CEO ownership (OWN) has a positive moderating effect (+), when CEO ownership increases, it weakens the negative (–) relationship between capital structure (CSV) and firm performance (FPM).

2.7.2 Reserach model

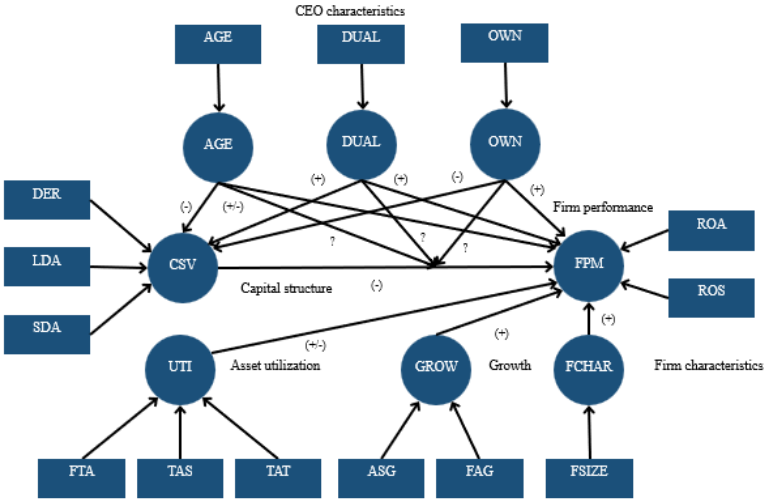

Figure 2.10: Research model
Source: Proposed by the author

Chapter 3
RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

This study adopts an exploratory research design. A mixed-methods approach, combining both qualitative and quantitative techniques, is employed. The research design is implemented in three stages: exploratory qualitative research, quantitative research, and the synthesis and reporting of findings.

3.2 RESEARCH PROCESS

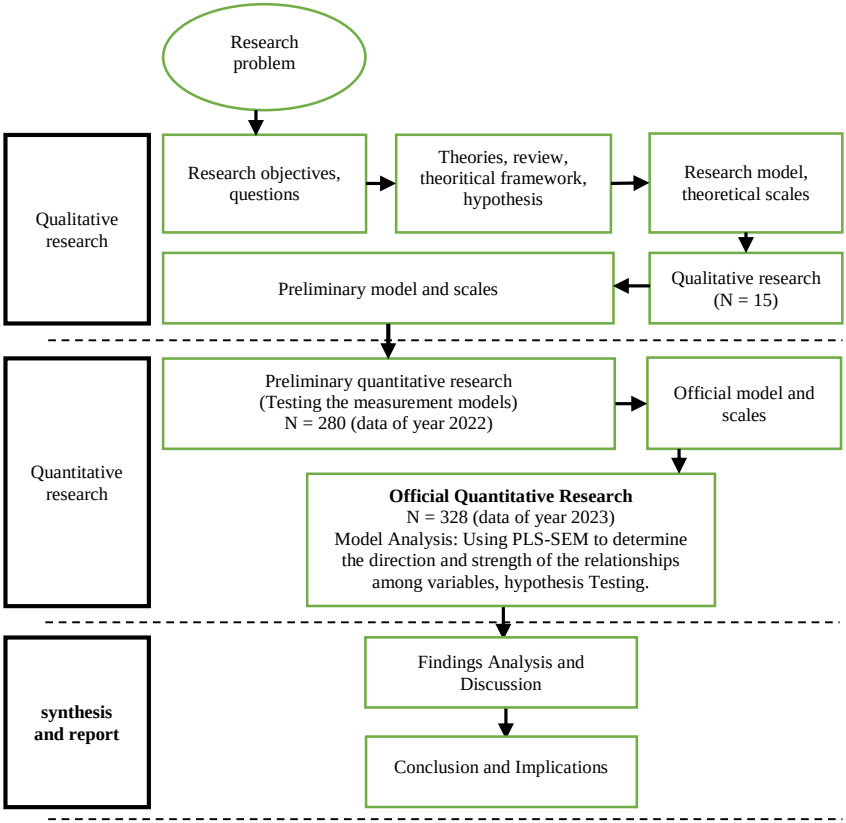

Figure 3.1: Research process diagram
Source: Proposed by the author

3.3 QUALITATIVE RESEARCH

3.3.1 Data collection methods for qualitative analysis

3.3.1.1 Sample size

The qualitative study employs interviews with 15 experts and managers, including members of company executive boards, mid-level financial and business managers, and professional analysts of firm performance.

3.3.1.2 Sampling and allocation

The qualitative sample is allocated as follows: 5 directors or deputy directors, 5 mid-level financial and business managers, and 5 professional analysts.

3.3.1.3 Data collection

Based on the designed sample, data for the qualitative study are collected using a semi-structured questionnaire. In addition, Google Forms are utilized to facilitate responses from geographically distant experts.

3.3.1.4 Questionnaire design for survey

The questionnaire is designed to collect expert and managerial opinions during the qualitative phase, with the aim of assessing the alignment between theoretical foundations and practical relevance of the proposed measurement scales and constructs derived from the literature review. A five-point Likert scale is employed to measure respondents' evaluations.

3.3.2 Qualitative data analysis methods

For qualitative analysis, descriptive statistics of expert ratings are employed, combined with analysis and comparison of mean scores to select preliminary measurement scales. The acceptance or elimination of measurement items is determined based on two quantitative criteria: (i) the mean evaluation score and (ii) the Item-level Content Validity Index (I-CVI) following Yusoff (2019). This approach enables the quantification of expert consensus during the scale refinement stage.

Specifically, items are retained if they simultaneously satisfy two conditions: mean score ≥ 3.00 and I-CVI ≥ 0.70. A mean threshold of 3.00 on a five-point Likert scale reflects evaluations ranging from "neutral" to "agree," indicating a generally positive assessment by experts (Hsu and Sandford, 2007). This method is consistent with established scale development procedures in social science research, where expert judgments are quantified to screen and refine measurement items prior to quantitative validation (Boateng et al., 2018).

3.4 QUANTITATIVE RESEARCH

3.4.1 Data collection methods for quantitative analysis

3.4.1.1 Sample size

According to Hair et al. (2017), the minimum sample size for PLS-SEM analysis should follow the "10-times rule." Accordingly: (i) The preliminary quantitative study includes 280 observations (70 firms × 4 quarters in 2022); (ii) The main quantitative study includes 328 observations (82 firms × 4 quarters in 2023).

3.4.1.2 Sampling method

The study employs a non-probability convenience sampling method (Bui Nhat Vuong & Ha Nam Khanh Giao, 2024).

3.4.1.3 Data collection

Secondary data are collected from companies, with data sources obtained from securities firms in Vietnam.

3.4.2 Quantitative data analysis methods

3.4.2.1 Descriptive statistics

After data collection and screening, valid observations are included for analysis to ensure compliance with research design and sampling conditions. Descriptive statistics are conducted to characterize the sample (Vu Huu Thanh & Nguyen Minh Ha, 2021), including: (1) Measures of central tendency: mean, median, and mode; (2) Measures of dispersion: variance, standard deviation, and range. These statistics are computed for all variables in the research model.

3.4.2.2 PLS-SEM Analysis

The study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) as the primary analytical technique. This is a modern structural modeling approach capable of effectively handling complex models involving mediating and moderating variables, as well as relationships among latent constructs. The analysis follows the approach proposed by Hafiz Hanafiah (2020), which is particularly suitable for models incorporating formative measurement constructs and the characteristics of the research data.

3.5 THEORETICAL AND PRELIMINARY MEASUREMENT SCALES

Based on the literature review of prior studies, the author develops a set of theoretical measurement scales for the constructs in the research model. Subsequently, drawing on the qualitative research findings, these scales are refined and developed into preliminary measurement scales for use in the pilot quantitative study.

3.6 PRELIMINARY QUANTITATIVE RESEARCH AND FINAL MEASUREMENT SCALES

Based on the preliminary scales developed in Section 3.5, a pilot quantitative study is conducted with a sample size of 280 observations (data from 2022). The results are used to assess the reliability and validity of the measurement scales and to make necessary adjustments for refinement. Accordingly, the final measurement scales are established for the main quantitative study. The main study is conducted with 328 observations (data from 2023), and the results of the analysis are presented in detail in Chapter 4.

Chapter 4
RESULTS AND DISCUSSION

4.1 DESCRIPTIVE STATISTICS

The survey sample consists of a total of 328 observations (82 companies × 4 quarters), with descriptive statistics for the variables presented in Tables 4.1, 4.2, and 4.3 below.

Table 4.1: Descriptive statistics of the Research Sample

	N	Min	Max	Mean	Standard Dev.	≤ Mean (%)	> Mean (%)
FSIZE (tỷ đồng)	328	198	669.617	24.445,550	85.044,110	83,840	16,160
ROS (%)	328	-22.449,560	11.713,400	-56,570	1.574,410	4,570	95,430
ROA (%)	328	-7,340	19,720	0,560	1,510	64,630	35,370
SDA (%)	328	0,370	86,580	37,320	19,920	53,660	46,340
LDA (%)	328	0,000	69,610	16,720	16,030	57,010	42,990
DER (%)	328	0,440	3.788,250	186,260	282,120	67,070	32,930
ASG (%)	328	-32,060	95,540	1,440	14,880	57,320	42,680
FAG (%)	328	-6,230	29,120	0,020	1,800	83,840	16,160
TAS (%)	328	0,000	84,420	8,340	14,970	73,170	26,830
FTA (%)	328	0,000	84,440	10,320	16,980	73,480	26,520
TAT (lần)	328	-0,500	48,610	6,030	6,820	65,850	34,150
Valid N	328						

Source: Descriptive statistics of data

Table 4.2: CEO's age

	N	Min	Max	Mean	Standard Dev.	≤ Mean (%)	> Mean (%)
AGE - Tuổi (năm)	328	29	75	49,590	8,448	54,880	45,120
Valid N	328						

Source: Descriptive statistics of data

Table 4.3: CEO duality and ownership

Đặc điểm giám đốc điều hành của mẫu khảo sát	1 (%)	0 (%)
DUAL (1 = Duality, 0 = Not)	4,880	95,120
OWN (1: Ownership >=5%, 0: Not)	19,510	80,490

Source: Descriptive statistics of data

4.2 QUANTITATIVE ANALYSIS RESULTS

4.2.1 Results of the Research Model Testing

The results of the structural model path coefficients indicate the relationships among the variables as follows:

(i) Direct effect of capital structure (CSV) on firm performance (FPM)

CSV → FPM: The path coefficient is -0.429 with a p-value of 0.000 (less than 0.05), indicating that CSV has a statistically significant negative effect on FPM.

(ii) Direct effects of CEO characteristics on firm performance (FPM)

AGE → CSV: The path coefficient is -0.131 with a p-value of 0.036 (less than 0.05), suggesting that CEO age (AGE) has a statistically significant negative effect on capital structure (CSV).

AGE → FPM: The path coefficient is 0.134 with a p-value of 0.009 (less than 0.05), indicating that CEO age has a statistically significant positive effect on firm performance (FPM).

DUAL → CSV: The path coefficient is -0.194 with a p-value of 0.572 (greater than 0.05), suggesting that the CEO duality (DUAL) has a negative effect on CSV, but this effect is not statistically significant. There is insufficient evidence to confirm a relationship between DUAL and CSV.

DUAL → FPM: The path coefficient is 0.189 with a p-value of 0.484 (greater than 0.05), indicating that DUAL has a positive effect on FPM, but it is not statistically significant. There is insufficient evidence to confirm a relationship between DUAL and FPM.

OWN → CSV: The path coefficient is 0.259 with a p-value of 0.276 (greater than 0.05), indicating that CEO ownership (OWN) has a positive effect on CSV, but it is not statistically significant. There is insufficient evidence to confirm a relationship between OWN and CSV.

OWN → FPM: The path coefficient is -0.192 with a p-value of 0.321 (greater than 0.05), suggesting that OWN has a negative effect on FPM, but it is not statistically significant. There is insufficient evidence to confirm a relationship between OWN and FPM.

FCHAR → FPM: The path coefficient is 0.127 with a p-value of 0.008 (less than 0.05), indicating that firm characteristics (FCHAR, e.g., firm size) have a statistically significant positive effect on FPM.

GROW → FPM: The path coefficient is 0.190 with a p-value of 0.019 (less than 0.05), suggesting that firm growth (GROW) has a statistically significant positive effect on FPM.

UTI → FPM: The path coefficient is 0.459 with a p-value of 0.000 (less than 0.05), indicating that utilization (UTI) has a statistically significant positive effect on FPM.

(iii) Indirect Effects of CEO Characteristics on Firm Performance

AGE → CSV → FPM: The indirect effect is calculated as (-0.131) × (-0.429) = 0.056 with a p-value of 0.047 (less than 0.05), indicating a statistically significant positive (+) indirect effect of CEO age (AGE) on firm performance (FPM) through capital structure (CSV).

DUAL → CSV → FPM: The indirect effect is (-0.194) × (-0.429) = 0.083 with a p-value of 0.567 (greater than 0.05), suggesting that the indirect effect of CEO duality (DUAL) on FPM through CSV is not statistically significant.

OWN → CSV → FPM: The indirect effect is (0.259) × (-0.429) = -0.111 with a p-value of 0.292 (greater than 0.05), indicating that the indirect effect of CEO ownership (OWN) on FPM through CSV is not statistically significant.

(iv) Moderating Effects of CEO Characteristics

AGE × CSV → FPM: The interaction effect between AGE × CSV and FPM is -0.260 with a p-value of 0.001 (less than 0.05), indicating that CEO age (AGE) negatively (−) moderates the relationship between CSV and FPM, and this effect is statistically significant.

DUAL × CSV → FPM: The interaction effect between DUAL × CSV and FPM is 0.824 with a p-value of 0.027 (less than 0.05), suggesting that CEO duality (DUAL) positively (+) moderates the relationship between CSV and FPM, and this effect is statistically significant.

OWN × CSV → FPM: The interaction effect between OWN × CSV and FPM is 0.121 with a p-value of 0.537 (greater than 0.05), indicating that CEO ownership (OWN) does not have a statistically significant moderating effect on the relationship between CSV and FPM.

4.2.2 Testing of Research Hypotheses

a. Testing the Hypotheses on the Effects of Capital Structure

Table 4.11: Hypotheses on Capital Structure and Firm Performance

Symbol	Hypothesis	Std. Reg. Coefficient (β)	p-value	Testing Results
H_{CSV}	Capital structure (CSV) has a negative (−) effect on firm performance (FPM).	-0,429	0,000	Accepted

Source: Results of the PLS-SEM model analysis using SmartPLS4.

b. Testing the Hypotheses on the Effects of CEO Characteristics

(i) Hypotheses on the Effects of CEO Age

Table 4.12: Testing the Hypotheses of CEO Age

Symbols	Hypotheses	Std. Reg. Coefficient (β)	p-value	Testing Results
H_{AGE1}	CEO age (AGE) has a negative (−) effect on capital structure (CSV).	-0,131	0,036	Accepted
H_{AGE2}	CEO age (AGE) has a positive (+) effect on the firm's performance (FPM).	0,134	0,009	Accepted
H_{AGE3}	CEO age (AGE) has a positive (+) indirect effect on firm performance (FPM) through capital structure (CSV).	0,056	0,047	Accepted
H_{AGE4}	CEO age (AGE) negatively (−) moderates the relationship between capital structure (CSV) and firm performance (FPM), an increase in AGE strengthens the negative (−) relationship.	-0,260	0,001	Accepted

Source: Results of the PLS-SEM model analysis using SmartPLS4.

(ii) Hypotheses on the Effects of CEO Duality

Table 4.13: Testing the Hypotheses of CEO Duality

Symbols	Hypotheses	Std. Reg. Coefficient (β)	p-value	Testing Results
H_{DUAL1}	CEO duality (DUAL) has a positive (+) effect on capital structure (CSV).	-0,194	0,572	Rejected
H_{DUAL2}	CEO duality (DUAL) has a positive (+) effect on the firm's performance (FPM).	0,193	0,474	Rejected
H_{DUAL3}	CEO duality (DUAL) has a positive (+) indirect effect on firm performance (FPM) through capital structure (CSV).	0,083	0,567	Rejected
H_{DUAL4}	CEO duality (DUAL) positively (+) moderates the relationship between capital structure (CSV) and firm performance (FPM), an increase in DUAL weakens the negative (−) relationship.	0,824	0,027	Accepted

Source: Results of the PLS-SEM model analysis using SmartPLS4.

(iii) (iii) Hypotheses on the Effects of CEO Ownership

Table 4.14: Testing the Hypotheses of CEO Ownership

Symbols	Hypotheses	Std. Reg. Coefficient (β)	p-value	Testing Results
H_{OWN1}	CEO ownership (OWN) has a negative (−) effect on the firm's capital structure (CSV).	0,259	0,276	Rejected
H_{OWN2}	CEO ownership (OWN) has a positive (+) effect on the firm's performance (FPM).	-0,192	0,321	Rejected
H_{OWN3}	CEO ownership (OWN) has a positive (+) indirect effect on firm performance (FPM) through capital structure (CSV).	-0,111	0,292	Rejected
H_{OWN4}	CEO ownership (OWN) positively (+) moderates the relationship between capital structure (CSV) and firm performance (FPM), an increase in OWN weakens the negative (−) relationship.	0,121	0,537	Rejected

Source: Results of the PLS-SEM model analysis using SmartPLS4.

4.3 DISCUSSION

4.3.1 The Effect of Capital Structure on Firm Performance

Comparing to related theories

According to the capital structure theory, the trade-off theory, and the pecking order theory, if the capital structure is not maintained below the optimal threshold—where the benefits of increased debt are completely offset by additional financial distress costs incurred by the firm (Ekadjaja et al., 2021)—then an increase in debt or capital structure will have a negative impact on firm performance. This finding is consistent with the results of this study and also suggests that many firms in the sample may have utilized debt beyond their optimal capital structure threshold.

Comparing to previous empirical studies

The results of this dissertation are fully consistent with the findings of Abor (2007). Similarly, the study by Ahmed, Sheikh, & Wang (2013) also reported this negative relationship. In addition, the research by Ekadjaja et al. (2021) further confirms that capital structure has a negative (−) effect on firm performance, aligning with the results of this study.

4.3.2 The Effects of CEO Characteristics

4.3.2.1 The Effect of CEO Age

The results of this study indicate that: (i) CEO age has a negative (−) effect on capital structure; (ii) CEO age has a positive (+) effect on firm performance; (iii) CEO age has a partial mediating effect, positively (+) influencing firm performance through capital structure; (iv) CEO age negatively (−) moderates the relationship between capital structure and firm performance.

Comparing to related theories

The Upper Echelons Theory (UET) emphasizes the link between the personal characteristics of CEOs and their strategic and financial decisions, which directly influence firm performance. This theoretical perspective is consistent with the effects of CEO age on capital structure and firm performance observed in this study.

Comparing to previous empirical studies

(i) CEO age is found to have a negative (–) effect on corporate capital structure. This result is consistent with the findings of Vintilă and Toader (2020) and Ting et al. (2015), but contradicts the evidence reported by De Silva and Banda (2022).

(ii) CEO age exhibits a positive (+) effect on firm performance. This finding aligns with the study by Wang et al. (2016), but contrasts with the results of Gupta and Mahakud (2020). These inconsistencies suggest that the direction of the relationship between CEO age and firm performance remains inconclusive, thereby calling for further empirical investigation.

The empirical results of this study indicate that CEO age has a positive impact on firm performance in the context of the Vietnamese real estate sector in 2023, which differs from several international studies reporting a negative effect. This divergence can be explained by the unique context of the Vietnamese real estate market during a period characterized by downturn and liquidity constraints in 2023. Under conditions of high uncertainty, the risk management capability, crisis-handling experience, and accumulated social capital of older CEOs may serve as critical advantages, enabling firms to sustain operations and stabilize performance. Moreover, within a relationship-based institutional environment such as Vietnam, CEO age may reflect the accumulation of social capital and market reputation, thereby enhancing firms' access to resources and their ability to navigate regulatory constraints. Therefore, the positive effect of CEO age observed in this study underscores the context-dependent nature of the relationship between managerial characteristics and firm performance.

(iii) The partial positive (+) mediating effect of CEO age on firm performance through capital structure provides additional empirical support, consistent with the findings of Naseem et al. (2020).

(iv) The ***negative (−) moderating effect*** of CEO age on the relationship between capital structure and firm performance appears to be a ***"novel finding of this study"***, as no prior research has reported such a moderating effect.

4.3.2.2 The Effect of CEO Duality

The results indicate that CEO duality ***positively (+) moderates*** the relationship between capital structure and firm performance.

Comparing to related theories

According to Agency theory, the principal–agent problem where the owner (principal) and the manager (agent, CEO) have potentially conflicting interests is a classic example of moral hazard. The separation of ownership and management can lead to managers acting in their own interests rather than those of the owners. When the CEO also serves as the chair of the board (CEO duality), they assume additional responsibilities representing the interests of the majority shareholders. Nevertheless, the findings support the predictions of Stewardship Theory.

Comparing to previous empirical studies

This finding can be considered ***"a novel contribution"***, as the author has not found prior research reporting that CEO duality positively (+) moderates the relationship between capital structure and firm performance, as observed in this study.

Chapter 5
CONCLUSION AND IMPLICATIONS

5.1 CONCLUSION

5.1.1 Conclusions Regarding Research Objective and Question 1

Based on the data analysis and hypothesis testing results of the research model, this dissertation provides empirical evidence indicating that: (1) CEO age (AGE) and CEO duality (DUAL) have the moderating effects on the relationship between capital structure (CSV) and firm performance (FPM) in real estate companies listed on the Ho Chi Minh Stock Exchange (HOSE), Vietnam (Section 4.2.3.2); (2) CEO age (AGE) has a negative (–) effect on capital structure (CSV) in real estate companies listed on HOSE, Vietnam (Section 4.2.3.2); (3) CEO age (AGE) has a positive (+) effect on firm performance (FPM) in real estate companies listed on HOSE, Vietnam (Section 4.2.3.2); (4) CEO age (AGE) has a partial mediating effect, with a positive (+) direction, on firm performance (FPM) through the mediating variable of capital structure (CSV) in real estate companies listed on HOSE, Vietnam (Section 4.2.3.2); (5) No empirical evidence is found for the effect of CEO ownership exceeding 5% (OWN) on the relationship between capital structure (CSV) and firm performance (FPM) in real estate companies listed on HOSE, Vietnam (Section 4.2.3.2).

Additionally, the study provides empirical evidence regarding control variables in the model, indicating that: (1) Firm growth (GROW) and asset utilization (UTI) both have positive (+) effects on firm performance (FPM) in real estate companies listed on HOSE, Vietnam (Section 4.2.3.3); (2) Firm size (FSIZE) has a positive (+) effect on firm performance (FPM) in real estate companies listed on HOSE, Vietnam (Section 4.2.3.3); (3) Capital structure (CSV) is significantly associated with firm performance (FPM) in real estate companies listed on HOSE, Vietnam (Section 4.2.3.1).

Overall, in addressing Research Question 1, the study demonstrates that: (i) CEO age (AGE) has a direct effect on firm performance (FPM); (ii) CEO age (AGE) has an partial indirect effect on firm performance (FPM) through capital structure (CSV); (iii) CEO age (AGE) and CEO duality (DUAL) moderate the relationship between capital structure (CSV) and firm performance (FPM).

In conclusion, CEO characteristics, specifically age (AGE) and CEO duality (DUAL), play a moderating role in the relationship between capital structure (CSV) and firm performance (FPM) in real estate companies listed on HoSE, Vietnam. This finding represents ***"a novel contribution"*** compared to prior studies by Naseem et al. (2020) and Supriyanto and Kho (2022).

5.1.2 Conclusions for research objectives and questions 2 and 3

(1) Direct effect of capital structure on firm performance

The results indicate that capital structure has a negative (–) direct effect on firm performance, with a coefficient of $\beta = -0.429$. This finding suggests that an increase in financial leverage reduces the performance of real estate companies listed on the Ho Chi Minh Stock Exchange (HOSE).

(2) Direct and mediating effects of CEO characteristics

The findings reveal that CEO characteristics, proxied by CEO age (AGE), influence firm performance (FPM) through both direct and indirect channels via capital structure (CSV).

First, AGE has a positive (+) direct effect on firm performance, with a coefficient of $\beta = 0.134$, indicating that older CEOs tend to enhance firm performance. At the same time, AGE has a negative (–) effect on capital structure ($\beta = -0.131$), suggesting that older CEOs are more conservative in the use of financial leverage.

Second, through the mediating mechanism of capital structure, AGE generates a positive (+) indirect effect on firm performance, with a coefficient of $\beta = 0.056$. This result confirms the partial mediating role of capital structure in the relationship between CEO age and firm

performance. Thus, the influence of CEO age on firm performance arises not only from managerial capability and accumulated experience (direct effect), but also from financial decision-making related to capital structure (indirect effect).

In summary, CEO age have both a direct effect on firm performance and an indirect effect through the mediating role of capital structure.

(3) Moderating effects of CEO characteristics

The results further indicate that CEO characteristics play a moderating role in the relationship between capital structure and firm performance, as follows:

CEO age (AGE) has a negative (–) moderating effect, with a coefficient of $\beta = -0.260$, indicating that as CEOs become older, the negative relationship between capital structure and firm performance becomes stronger. This suggests that older CEOs tend to amplify the adverse effects of financial leverage on firm performance.

In contrast, CEO duality (DUAL) has a positive (+) moderating effect, with a coefficient of $\beta = 0.824$. When the CEO concurrently serves as the Chairperson of the Board, the negative (–) impact of capital structure on firm performance is weakened. In other words, centralized leadership may enable firms to better manage financial risks and mitigate the adverse effects of financial leverage.

Overall, while capital structure has a negative (–) direct effect on firm performance, the magnitude of this effect depends on CEO characteristics, as reflected in the moderating roles of AGE and DUAL.

(4) Effect of firm growth

Firm growth (GROW) has a positive (+) direct effect on firm performance (FPM), with a coefficient of $\beta = 0.190$.

(5) Effect of asset utilization

Asset utilization (UTI) has a positive (+) direct effect on firm performance (FPM), with a coefficient of $\beta = 0.459$.

(6) Effect of firm size

Firm size (FSIZE) has a positive (+) direct effect on firm performance (FPM), with a coefficient of $\beta = 0.127$.

5.2 IMPLICATIONS

Based on the research findings, and in order to achieve the research objectives and answer the research question 4, the author proposes the following managerial implications:

5.2.1 For real estate companies

Several managerial implications derived from the research findings for real estate firms are presented in Sections 5.2.1.1 to 5.2.1.3 below.

5.2.1.1 Implications related to capital structure

According to the descriptive statistics of the research data, the average Debt-to-Equity Ratio (DER) is 186.26%. Notably, 32.93% of real estate firms in the sample exhibit a DER higher than this average level. Currently, neither the government nor commercial banks impose explicit regulatory thresholds on leverage based on the debt-to-equity ratio. In practice, commercial banks typically provide loans of approximately 50% of project value, which corresponds to roughly 100% of the firm's equity investment in a project. Therefore, the observed average DER of 186.26% suggests a potentially risky capital structure. This risk is even more pronounced for the 32.93% of firms with above-average DER levels. In the event of weakened market demand, the risks of illiquidity and financial distress become particularly significant.

Regarding hypothesis H_{CSV}: which posits that capital structure has a negative (–) effect on firm performance, the author proposes that firms should carefully determine an optimal capital structure aligned with their capacity for efficient capital utilization, in order to mitigate the adverse effects of financial leverage on performance. Specifically: (i) Establishing an optimal capital structure: Firms should determine an appropriate debt ratio consistent with their growth stage and size. High-growth firms should prioritize long-term financing to maintain stable cash

flows, while smaller firms should limit financial leverage to reduce bankruptcy risk. However, these implications should be further examined in specialized corporate finance studies; (ii) Strengthening governance and control mechanisms: Owners (through the General Meeting of Shareholders), together with the Board of Directors and Supervisory Board, should implement internal regulations that set limits on capital structure as a key mechanism to monitor and control CEOs who may exhibit higher risk-taking behavior; (iii) Optimizing the cost of capital: Firms should assess asset utilization efficiency before expanding operations or increasing debt. Short-term financing should be used primarily for working capital needs to avoid long-term interest burdens; (iv) Adjusting capital structure strategies across growth stages: During periods of rapid growth, firms may adopt higher leverage but must implement strict risk management practices. In more stable phases, firms should prioritize equity financing to reduce debt pressure.

5.2.1.2 Implications related to CEO Age

Regarding Hypothesis H_{AGE1}, CEO age (AGE) has a negative (–) effect on capital structure (CSV). The managerial implication is that firms should design appropriate incentive mechanisms to balance the conservative tendencies associated with older CEOs. Specifically, for older CEOs, firms should implement long-term performance-based incentives to avoid excessive risk aversion that may lead to missed opportunities for enhancing firm value through the prudent use of financial leverage.

Regarding Hypothesis H_{AGE2}, CEO age (AGE) has a positive (+) effect on firm performance (FPM). This suggests that older CEOs tend to deliver better performance due to their accumulated experience, maturity, and stable decision-making capabilities. Accordingly, firms should: (i) Leverage the experience of older CEOs in long-term strategic decisions or in tasks requiring strong vision and risk control; (ii) Institutionalize knowledge transfer by establishing mechanisms for

experience sharing between senior CEOs and successor teams, as commonly practiced in Japanese firms; (iii) Avoid appointing excessively young top executives, as managerial experience often associated with age can contribute positively to firm performance.

Regarding Hypothesis H_{AGE3}, CEO age (AGE) has a positive (+) indirect effect on firm performance (FPM) through the mediating role of capital structure (CSV). The author suggests that boards of directors should design debt management strategies that align with the demographic characteristics of CEOs, particularly age, rather than applying a uniform leverage policy. The inherent conservatism of older CEOs should be considered when determining optimal debt thresholds, which may, in turn, enhance firm performance.

Regarding Hypothesis H_{AGE4}, CEO age (AGE) has a negative (–) moderating effect, such that an increase in AGE strengthens the negative relationship between capital structure (CSV) and firm performance (FPM). The managerial implication is that in firms led by older CEOs, greater caution should be exercised in designing capital structures particularly in controlling leverage levels in order to mitigate the adverse moderating effect of CEO age on the capital structure and performance relationship.

In sum, CEO age (AGE) has a positive influence on firm performance (FPM), encompassing both direct and indirect effects through capital structure, with a total estimated effect of $\beta = 0.190$. This indicates that firms led by older CEOs tend to achieve higher performance. However, this effect is not uniform and depends on the firm's level of leverage. Specifically, AGE plays a negative moderating role in the relationship between capital structure and firm performance. As leverage increases, the positive effect of CEO age on firm performance tends to diminish. In other words, in firms with high financial leverage, the advantages associated with CEO experience and age become less pronounced. Therefore, in firms led by older CEOs, it is

essential to carefully manage leverage levels to mitigate the adverse moderating impact of CEO age on the capital structure–performance relationship.

5.2.1.3 Implications related to CEO duality

Regarding Hypothesis H_{DUAL4}, CEO duality (DUAL) has a positive (+) moderating effect, such that when the CEO concurrently serves as the Chairperson, the negative (–) relationship between capital structure (CSV) and firm performance (FPM) is weakened.

The managerial implication is that CEO duality may generate beneficial effects by mitigating the adverse impact of financial leverage on firm performance. This finding suggests that firms should not necessarily view the separation of the roles of Chairperson and CEO as a direct solution for improving performance. Instead, greater emphasis should be placed on enhancing the overall quality of corporate governance. CEO duality may be considered an organizational arrangement that, under appropriate conditions, can improve the efficiency of capital utilization. Accordingly, the author proposes that firms may consider appointing a CEO who also serves as Chairperson, provided that adequate governance and risk control mechanisms are in place to manage potential agency risks associated with role concentration. Such an arrangement may help leverage the positive moderating effect of CEO duality on capital efficiency and firm performance.

5.2.1.4 Other implications related to the research findings

Regarding ***F****irm size:* The empirical results indicate that firm size has a positive (+) effect on firm performance. Accordingly, the managerial implication is that firms should leverage economies of scale while enhancing their capacity to utilize resources efficiently in order to maximize the positive impact of scale advantages on performance.

Regarding Asset utilization: The findings also reveal that asset utilization has a positive (+) effect on firm performance. Therefore, firms should focus on optimizing asset utilization efficiency to avoid resource

waste. In particular, smaller firms should prioritize improving asset turnover ratios to enhance operational performance.

Regarding Firm growth: The results further show that firm growth has a positive (+) effect on firm performance. Thus, firms are encouraged to invest in growth strategies, as sustained growth can enhance performance and, in the long term, strengthen competitive advantages through the expansion of resources and firm scale.

Taken together, the overarching managerial implication for real estate firms is that determining an optimal capital structure aligned with the firm's operational capacity plays a critical role in maximizing firm performance. The empirical evidence suggests that firms led by older CEOs tend to achieve higher performance; however, this effect is not uniform and depends on the level of financial leverage. In other words, CEO age moderates the relationship between capital structure and firm performance. Therefore, in firms led by older CEOs, careful control of leverage levels is essential to mitigate potential adverse moderating effects. In addition, CEO duality, where the CEO concurrently serves as Chairperson of the Board, has been found to contribute to improved capital efficiency. However, this effect is highly contingent upon the operational context (periods of crisis, uncertainty, or strategic opportunities), governance needs, and the effectiveness of internal monitoring mechanisms. Accordingly, the adoption of CEO duality should be carefully considered based on contextual requirements, with appropriate risk control mechanisms in place to mitigate potential conflicts of interest and ensure effective oversight. When implemented within a suitable governance structure, CEO duality can enhance its positive moderating effect on the relationship between capital structure and firm performance.

5.2.2 For multinational corporations

Based on the research findings, several key managerial implications can be drawn for multinational corporations (MNCs): (i)

Capital structure should be flexibly designed at the country level while being centrally monitored at the group level to mitigate systemic risk; (ii) CEO age provides advantages in terms of experience and strategic stability; however, financial leverage should be carefully controlled in a multinational context to avoid amplifying risk; (iii) CEO duality may yield positive effects when embedded within a transparent governance framework supported by effective independent oversight mechanisms; (iv) The benefits of scale and international growth can only be effectively translated into improved firm performance when accompanied by strong financial management capabilities and cross-border risk management.

Overall, for MNCs, capital structure is not merely a financial decision but is closely intertwined with CEO demographic characteristics and top-level governance structures. The interaction among these factors plays a critical role in determining the firm's ability to optimize performance in a highly competitive global environment.

5.2.3 For Stakeholders

For Shareholders and Investors: Based on the findings of this study, shareholders and investors should evaluate companies by considering the relationships among capital structure, CEO characteristics, and firm performance, as well as the company's growth potential, before making investment or credit decisions. Attention should be given to the effects of CEO age and the positive moderating role of CEO duality on capital efficiency and firm performance when selecting CEOs and board chairpersons or deciding on credit provision. Investors are advised to prioritize companies that demonstrate efficient asset utilization, possess a clear growth strategy, and enjoy size advantages, as these characteristics enhance business performance.

For Credit Institutions and Policymakers: The study provides insights for developing criteria to select and monitor the leadership of listed companies, particularly in sectors that are sensitive to economic fluctuations and require high capital, such as real estate. It also highlights

the need for policies to control credit and financial risk, for instance, by establishing maximum limits for the debt-to-equity ratio (DER) when providing credit to real estate companies or other industries, with thresholds potentially adjusted according to specific risk characteristics. To date, there is no policy issued by the central bank that regulates lending risk based on this ratio.

5.3 CONTRIBUTIONS OF THE DISSERTATION

Based on the research findings and by comparing them with the identified research gaps (Section 2.3.3) and the novel aspects of this study (Section 4.3.6), the dissertation makes the following contributions:

5.3.1 Theoretical Contributions

5.3.1.1 Novel findings and bridging research gaps

A key and distinctive contribution of this study lies in identifying the moderating role of CEO age (AGE) and CEO duality (DUAL) in the relationship between capital structure (CSV) and firm performance (FPM). This finding has not been addressed in prior studies such as those by Naseem et al. (2020) and Supriyanto and Kho (2022). In addition, the study clarifies both the direct and indirect relationships between CEO age and firm performance, with capital structure acting as a mediating variable. By developing an integrated model that simultaneously captures direct, indirect (mediating), and moderating effects, this research provides a more comprehensive theoretical framework compared to previous models. Accordingly, the study contributes to narrowing the theoretical gaps identified in Section 2.4 and extends current understanding of the mechanisms through which top executive characteristics influence firm performance. These contributions enrich the existing body of knowledge in several important ways: (i) Theoretical contribution through novel findings: The study provides new empirical evidence on the moderating effects of CEO characteristics (age and duality) on the relationship between capital structure and firm performance, thereby addressing a previously underexplored area in the

literature. Furthermore, it confirms the partial mediating role of CEO age in influencing firm performance through capital structure, particularly within the real estate sector; (ii) Bridging industry and geographical gaps: The dissertation focuses on real estate firms in Vietnam, thereby addressing both industry-specific and geographical gaps in the existing literature on this topic.

5.3.1.2 Application of the Moderated Mediation Model

This study employs a moderated mediation model, which simultaneously captures both mediating and moderating effects. This approach differs from prior studies, such as Naseem et al. (2020) and Supriyanto and Kho (2022), which focus solely on mediation effects, and Mokhtar et al. (2023), which examines only moderating effects. In the proposed research model, CEO characteristics function as a moderator at the second stage of the mediation process (second-stage moderation). Specifically, CEO characteristics influence the strength of the relationship between the mediating variable (capital structure) and the dependent variable (firm performance). The application of this model is particularly valuable in the Vietnamese context, where moderated mediation approaches are still underexplored.

5.3.1.3 Introduction of Additional Control Variables

This study extends prior research by incorporating two additional control variables that were not considered in related studies by Naseem et al. (2020) and Supriyanto and Kho (2022), namely asset utilization (UTI) and firm growth (GROW).

5.3.1.4 Introduction of new measurement indicators

Compared with prior studies by Naseem et al. (2020) and Supriyanto and Kho (2022), this study proposes several new measurement indicators for the constructs in the research model: *For firm performance (FPM),* the study employs Return on Assets (ROA) and Return on Sales (ROS) as measurement indicators, in contrast to the use of Tobin's Q in the aforementioned studies; *For capital structure (CSV),*

additional indicators are introduced, including Short-term Debt to Total Assets (SDA) and Long-term Debt to Total Assets (LDA); *For asset utilization – UTI (new),* the study utilizes Tangible Assets to Total Assets (TAS), Fixed Assets to Total Assets (FTA), and Total Asset Turnover (TAT) as measurement indicators; *For firm growth – GROW (new),* the study adopts Total Asset Growth (ASG) and Fixed Asset Growth (FAG) as measurement indicators.

5.3.1.5 Reinforcing and Extending Theoretical Foundations

This study contributes to reinforcing and extending three key theoretical perspectives:

Upper Echelons Theory: The findings confirm that CEO characteristics, such as age and CEO duality, play a moderating role in the relationship between capital structure and firm performance through strategic decision-making and operational management. This evidence deepens the core premise of Upper Echelons Theory, which posits that the demographic and psychological attributes of top executives shape organizational behavior and firm outcomes.

Agency Theory: Through the analysis of the moderating role of CEO duality (DUAL), the study provides additional insights into the potential positive effects of power concentration under appropriate conditions. While traditional Agency Theory emphasizes risks related to conflicts of interest and lack of transparency, the findings suggest that, in certain contexts, concentrated leadership may enhance decision-making efficiency and improve capital structure strategies. This supports a more nuanced and context-dependent interpretation of Agency Theory.

Stewardship Theory: CEO duality (DUAL) is not merely a governance characteristic but also reflects the concentration of authority and strategic unity. With its positive moderating effect, CEO duality can mitigate the negative impact of capital structure on firm performance by reducing internal conflicts, shortening decision-making processes, and ensuring consistency in strategic execution. When authority and

responsibility are unified in a leader with a long-term organizational orientation, coordination and monitoring costs are reduced, while organizational flexibility is enhanced. This mechanism aligns with and further supports the perspective of Stewardship Theory, which emphasizes pro-organizational behavior, while contrasting with the traditional Agency Theory view that highlights the risks of opportunism under concentrated power.

5.3.2 Methodological Contributions

This dissertation applies advanced data analysis techniques to a formative measurement model, a type of model that remains relatively underexplored in the Vietnamese research context. Specifically: (i) The study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to test a moderated mediation model, in which formative measurement constructs include both continuous and binary indicators; (ii) A decomposition technique is applied to operationalize CEO characteristics into single-indicator constructs, ensuring compatibility with SmartPLS 4 software; (iii) The study adopts the evaluation procedures for formative measurement models based on Hafiz Hanafiah (2020) (see Section b, Section 3.4.2.2), while adhering to the guidelines proposed by Joseph F. Hair et al. (2017), as detailed in Appendices F and G; (iv) The research applies the seven-step framework of Andersson et al. (2014), in conjunction with the six-step framework of Vũ Hữu Thành and Nguyễn Minh Hà (2023), to develop hypotheses on moderating effects. In addition, the study draws on Söderlund (2023), which identifies eight types of moderation models involving a moderator correlated with both independent and dependent variables. Based on these foundations, the study proposes an exploratory examination of the moderating role of CEO characteristics, representing a novel contribution compared to prior studies such as Supriyanto and Kho (2022) and Naseem et al. (2020); (v) The study develops a relatively rigorous theoretical and analytical

framework for formative PLS-SEM models, which can serve as a useful reference for future research.

5.3.3 Practical Contributions

In addition to its academic contributions, this dissertation provides meaningful practical value by offering useful scientific evidence for stakeholders to apply in real-world contexts.

5.3.3.1 Contributions to managerial practice in real estate firms

Beyond its theoretical contributions, this study offers valuable insights for real estate firms and managers regarding the relationship between CEO characteristics, capital structure, and firm performance. Specifically, the study contributes to managerial practice in the following ways: (i) Advancing financially informed leadership-oriented governance: The findings indicate that CEOs play a critical role in shaping capital structure decisions and firm performance. Therefore, when selecting top executives, firms should consider CEO age and duality (CEO also serves as Chairperson), alongside other factors such as experience and professional expertise. This approach enables firms to align financial strategies with leadership characteristics, thereby improving both capital allocation and human resource management; (ii) Supporting executive selection and governance design: Real estate firms can utilize the study's findings to develop policies, strategies, and procedures for the recruitment, placement, and monitoring of top executives (CEO and Chairperson). Aligning executive appointments with the firm's financial and governance strategies can help optimize performance and mitigate risks arising from the interaction between capital structure, CEO characteristics, and firm outcomes. The findings also provide a basis for evaluating the benefits and risks associated with CEO duality; (iii) Providing an applied analytical framework for decision-making: The research model proposed in this dissertation offers an applicable analytical framework that can support corporate decision-making and policy formulation. In particular, it facilitates a more

systematic understanding of the relationships among key determinants of firm performance, especially capital structure and top-level leadership management. The model can be translated into a practical tool to assist firms in designing capital structure policies and executive governance arrangements, particularly in dynamic and volatile economic and industry environments.

5.3.3.2 Contributions to Stakeholder Practice

This study provides a valuable reference for investors, shareholders, and financial institutions in better understanding the role of the Chief Executive Officer (CEO) in capital structure decisions, investment strategies, and credit risk assessment, as well as in monitoring corporate governance effectiveness. In addition, the findings offer important implications for policymakers and regulatory authorities in developing criteria for evaluating corporate governance quality, particularly in high-risk and highly leveraged industries such as real estate. Furthermore, the study proposes specific managerial and policy implications that can be applied in practice, serving as a useful reference for stakeholders in designing corporate governance policies, especially those related to capital structure and top-level leadership arrangements, including the roles of CEO and Chairperson of the Board (Section 5.2).

In conclusion, this study develops an integrated theoretical model, identifies novel moderating effects with significant academic value, and provides practical insights for real-world application. These contributions not only help bridge existing knowledge gaps but also strengthen the linkage between theory and practice in capital structure management and top executive governance, particularly within the Vietnamese real estate sector.

5.4 LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

5.4.1 Research Limitations

This study is subject to several limitations that should be acknowledged: *(i) Data collection on CEO characteristics:* Data on CEO

characteristics were collected consistently across four quarters of 2023, with observations recorded at four different time points within the same year. This approach reflects an objective constraint, aiming to ensure consistency in CEO characteristics (by avoiding variations due to leadership changes) while partially controlling for time-related effects. The focus on 2023 captures a unique economic and policy context, during which the Vietnamese real estate market experienced significant challenges alongside government interventions to address capital constraints and support firms. This period provides a meaningful context for examining risk management and strategic decision-making. Although data were collected at multiple time points, the observations were treated as independent and the temporal dimension was not explicitly modeled. While this approach entails certain limitations, it helps ensure sample consistency (avoiding biases from leadership changes, corporate restructuring, or fluctuations in the number of firms) and reduces the influence of time-specific shocks, thereby enhancing the reliability of the findings. The use of multiple observations within a single year serves to improve sample representativeness within a relatively homogeneous economic–policy context rather than to analyze time-series dynamics; *(ii) Limited sample size:* The number of real estate firms listed on the Ho Chi Minh Stock Exchange (HOSE) is relatively limited, resulting in a modest sample size. This may constrain the generalizability of the findings, particularly across different economic cycles within the real estate sector; (iii) Methodological novelty: The application of formative PLS-SEM following Hafiz Hanafiah (2020), particularly with measurement variables expressed as real-valued indicators (including both positive and negative values), remains relatively uncommon in the Vietnamese research context. This may limit comparability with prior studies; (iv) Omission of external factors: The study does not incorporate certain exogenous variables that may influence firm performance, which could affect the comprehensiveness of the model; (v) Measurement approach:

Most measurement scales are adapted from prior studies, and the study does not extensively explore alternative or newly developed measurement approaches for certain constructs; (vi) Industry scope: The research is limited to the real estate sector, which may restrict the generalizability of the findings to other industries; (vii) Sampling method: The use of convenience sampling implies that the characteristics of the sampled firms may not fully represent the broader population, potentially limiting the external validity of the results. This limitation should be addressed in future research; (viii) Assumption of independence: Although each firm is observed across multiple quarters, the observations are treated as largely independent, as strategic decisions and risk management practices are typically formulated and implemented on a quarterly basis, depending on firm-specific conditions and the economic context of each period. While this assumption is broadly consistent with the requirements of PLS-SEM—which is flexible with small sample sizes and does not require normally distributed data, it may still represent a limitation that future studies should address more rigorously, for example by explicitly modeling panel data structures.

5.4.2 Future Research Directions

Based on the aforementioned limitations, the author proposes several directions for future research related to this topic. These include: expanding the sample to include a broader range of research subjects; considering additional measurement variables for CEO characteristics; examining the characteristics of the Chairperson of the Board or broader board-level attributes; and extending the research to other emerging markets or industries with high financial leverage, such as banking and large-scale manufacturing.

General Conclusion of the Dissertation

This dissertation has made notable contributions in both theoretical and practical aspects. These contributions not only help enhance the quality and effectiveness of corporate governance in the real estate sector

but also provide valuable reference for relevant stakeholders in Vietnam. Accordingly, the dissertation addresses important requirements from both theoretical and practical perspectives. Furthermore, the study has established a research foundation that can be inherited and further developed in future studies. Based on the achieved results, it can be affirmed that the dissertation has successfully fulfilled its research objectives in a comprehensive and scientifically rigorous manner, within the defined scope of the study. However, the dissertation still has certain limitations, and corresponding directions for future research have been proposed, as presented in Section 5.4 above.