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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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2. Phan Tri Tuấn Anh, & Bùi văn Trịnh (2025). Ảnh hưởng từ cấu trúc vốn đến kết quả kinh doanh của doanh nghiệp thông qua đặc điểm nhà quản trị. *Tạp Chí Tài Chính, Kỳ 2-Tháng 3 (845)*, 78–81.

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 managerial characteristics on the impact of capital structure and firm performance of real estate companies listed on Ho Chi Minh City Stock Exchange. Based on the findings, the study aims to propose managerial implications to enhance firm performance in real estate firms, as well as policy recommendations for relevant stakeholders.

1.2.2 Specific objectives

In order to achieve the general objective, this dissertation pursues the following specific objectives:

To identify the key managerial characteristics that influence the capital structure and firm performance of real estate companies listed on the Ho Chi Minh City Stock Exchange.

To examine and quantify the impact of managerial characteristics on capital structure and firm performance in these companies.

To propose managerial and policy implications for real estate companies listed on the Ho Chi Minh City Stock Exchange and other relevant stakeholders based on the research findings.

1.3 RESEARCH QUESTIONS

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

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

(2) To what extent do managerial characteristics affect the capital structure and firm performance of these companies?

(3) Based on the research findings, what managerial and policy implications can be drawn for listed real estate companies on the Ho Chi Minh City Stock Exchange and other 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

This dissertation introduces several novel aspects that distinguish it from prior studies and contribute both theoretically and empirically to the field: (i) *Using Moderated Mediation Model:* In contrast to earlier studies that primarily examined direct and indirect (mediating) effects (e.g., Naseem et al., 2020; Supriyanto & Kho, 2022), this dissertation employs a moderated mediation model. Beyond testing direct and mediating relationships, the model additionally explores the moderating role of CEO characteristics in the relationship between capital structure and firm performance. This approach is expected to make a novel contribution by providing fresh theoretical insights into the interplay

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among managerial characteristics, capital structure, and firm performance, thereby enriching the existing literature and related theories in the real estate sector; *(ii) Introduction of New Control Variables:* The dissertation advances prior research by incorporating two additional control variables not considered in similar studies by Naseem et al. (2020) and Supriyanto & Kho (2022): Asset Utilization Index (UTI), Growth (GROW); *(iii) Refinement and Extension of Measurement Variables: Capital structure (CSV):* additional measures are introduced, including Debt-to-Equity Ratio (DER), Short-term Debt to Total Assets (SDA), and Long-term Debt to Total Assets (LDA); *Asset utilization (UTI):* the study employs Tangible Assets to Total Assets (TAS), as well as two newly developed indicators, namely Fixed Assets to Total Assets (FTA) and Total Asset Turnover (TAT); *Growth (GROW):* the study uses Asset Growth (ASG) and Fixed Asset Growth (FAG), both newly introduced to the model.

1.7 SIGNIFICANCE OF THE RESEARCH

1.7.1 Theoretical significance

This dissertation contributes to the existing literature by: (i) Examining 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, thereby narrowing the existing research gap in this area; (ii) Extending relevant theories by incorporating the moderating effect of CEO characteristics on the relationship between capital structure and firm performance, which has been rarely addressed in prior studies.

1.7.2 Practical significance

The findings provide scientific evidence and practical insights that can assist managers in the real estate sector in understanding key factors affecting the interplay between capital structure, CEO characteristics, and firm performance. Based on these insights, the study can offers implications for: (i) Strategic planning of human resources and capital

structure, aimed at selecting and developing suitable top management leaders; (ii) Developing analytical frameworks applicable in practice for managerial decision-making; (iii) Providing useful reference for stakeholders in formulating relevant policies.

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 RESEARCH CONCEPTS
2.1.1 Real estate companies and firm characteristics
2.1.1.1 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.

2.1.1.2 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.

2.1.2 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 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).

2.1.4 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.

2.1.5 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.

2.1.6 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).

2.2 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, Capital Structure Theory, Trade-off Theory of Capital Structure, Pecking Order Theory, Economies of Scale Theory, Resource-Based View.

2.4 REVIEW OF RELATED STUDIES

2.4.1 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)
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.

2.4.2 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)

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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.

2.4.3 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.

2.4.4 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.

2.4.5 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.

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2.4.6 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.

2.4.7 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.

2.5 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

CEO Characteristics
Upper Echelons Theory
Demographic Characteristics
Agency Theory
CEO Duality
CEO Ownership

Capital Structure Theory
Trade-off Theory of Capital Structure
Pecking Order Theory

Capital Structure

?

Dependent variable
Firm performance

Control Variables
Economies of Scale Theory,
Resource-Based View Theory
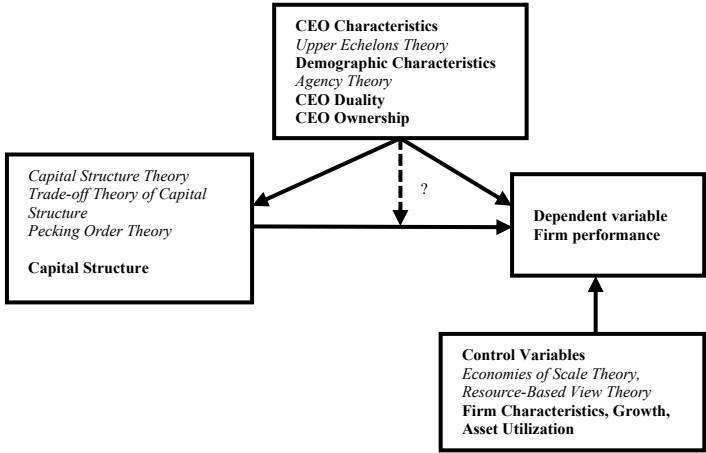**Firm Characteristics, Growth,**
Asset Utilization

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
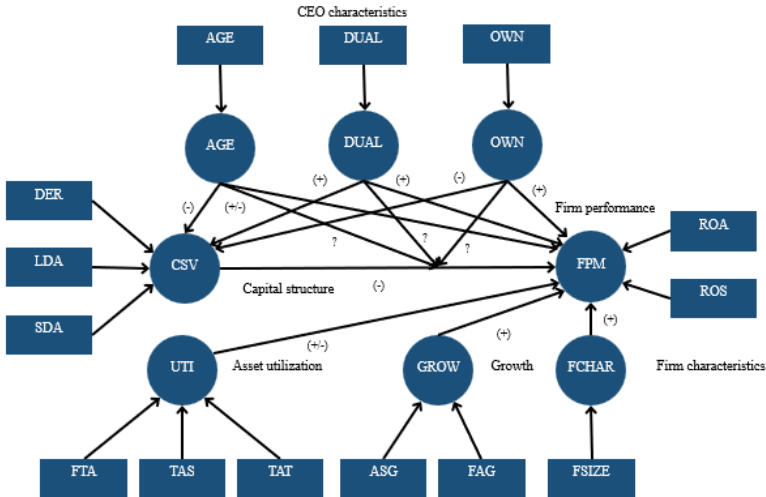
Figure 2.10: Research model
Source: Proposed by the author

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 DATA COLLECTION METHOD
3.3.1 Data collection method for qualitative research
3.3.1.1 Sample size

For the qualitative study, a total of 15 experts and managers were purposefully selected for interviews. The participants comprised board members, mid-level financial and business managers, and specialists analyzing business operations.

3.3.1.2 Sample selection and allocation

The qualitative study sample was allocated as follows: 5 CEOs or Deputy CEOs, 5 mid-level financial and business managers, and 5 experts specializing in business operations analysis.
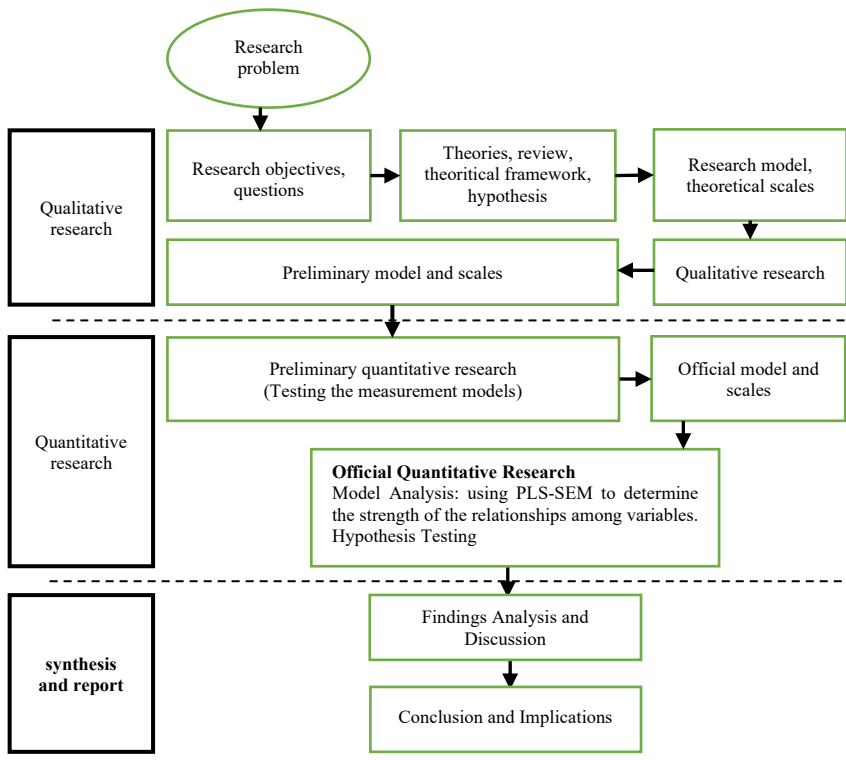
3.3.1.3 Data collection method

Based on the designed sample, the author conducted the qualitative data collection using structured questionnaires. For participants located at a distance, online survey forms (Google Forms) were employed to facilitate participation from experts and managers across different locations.

3.3.1.4 Questionnaire design for survey

The questionnaire was designed to collect expert assessments during the qualitative research phase. Its purpose was to evaluate the relevance and practical applicability of the theoretical framework, particularly regarding the proposed measurement scales and constructs derived from a review of prior studies. A 5-point Likert scale was used to capture the experts' assessments.

3.3.2 Data collection method for quantitative research
3.3.2.1 Sample size

According to Hair et al. (2017), the minimum sample size for PLS-SEM analysis should be the larger of the following two values, based on the "10-times rule": (i) Sample size for preliminary quantitative research: 280 observations (70 companies × 4 quarters in 2022 = 280 observations);

(ii) Sample size for official quantitative research: 328 observations (82 companies × 4 quarters in 2023 = 328 observations).

3.3.2.2 Sample selection and allocation

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

3.3.2.3 Data collection method

The author collected secondary data from companies, with the data sourced from securities firms in Vietnam.

3.4 DATA ANALYSIS METHOD

For the qualitative analysis, descriptive statistics were used to compare mean scores. For the quantitative analysis, Structural Equation Modeling using Partial Least Squares (PLS-SEM) was applied, following the approach of Hafiz Hanafiah (2020).

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	24.445,55	85.044,11	83,84	16,16
ROS (%)	328	-22.449,56	11.713,40	-56,57	1.574,41	4,57	95,43
ROA (%)	328	-7,34	19,72	0,56	1,51	64,63	35,37
SDA (%)	328	0,37	86,58	37,32	19,92	53,66	46,34
LDA (%)	328	0,00	69,61	16,72	16,03	57,01	42,99
DER (%)	328	0,44	3.788,25	186,26	282,12	67,07	32,93
ASG (%)	328	-32,06	95,54	1,44	14,88	57,32	42,68
FAG (%)	328	-6,23	29,12	0,02	1,80	83,84	16,16
TAS (%)	328	0,00	84,42	8,34	14,97	73,17	26,83
FTA (%)	328	0,00	84,44	10,32	16,98	73,48	26,52
TAT (lần)	328	-0,50	48,61	6,03	6,82	65,85	34,15
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	49,59	8,448	54,88	45,12
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)	4,88	95,12
OWN (1: Ownership >=5%, 0: Not)	19,51	80,49

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) The negative (−) effect of CEO age on capital structure is consistent with the findings of Vintilă & Toader (2020) and Ting et al. (2015), but contradicts the results of De Silva & Banda (2022).

(ii) The positive (+) effect of CEO age on firm performance aligns with the study by G. Wang et al. (2016), but differs from the findings of Gupta & Mahakud (2020). This inconsistency suggests that the effect of CEO age on firm performance remains inconclusive and requires further investigation.

(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, e.g., 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.

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 of the research model, this dissertation provides empirical evidence showing that: CEO age (AGE) and CEO duality (DUAL) moderate the relationship between capital structure (CSV) and firm performance (FPM) in real estate companies listed on the HoSE, Vietnam (Section 4.2.3.2); CEO age (AGE) has a negative (−) effect on capital structure (CSV) in these firms (Section 4.2.3.2); CEO age (AGE) has a positive (+) effect on firm performance (FPM) (Section 4.2.3.2); CEO age (AGE) has a partial positive (+) indirect effect on firm performance (FPM) through the mediating variable of capital structure (CSV) (Section 4.2.3.2); No empirical evidence was found for the effect of CEO ownership above 5% (OWN) on the relationship between capital structure (CSV) and firm performance (FPM) in these firms (Section 4.2.3.2).

Additionally, the study provides empirical evidence regarding the control variables in the model: Growth (GROW) positively (+) affects firm performance (FPM) in real estate companies listed on the HoSE, Vietnam (Section 4.2.3.3); Asset utilization (UTI) positively (+) affects firm performance (FPM) in these firms (Section 4.2.3.3); Firm size (FSIZE) positively (+) affects firm performance (FPM) (Section 4.2.3.3); Capital structure (CSV) is related to firm performance (FPM) (Section 4.2.3.1). The study indicates that CEO age (AGE) has both a direct effect on firm performance (FPM) and an indirect effect through capital structure (CSV). Furthermore, 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 duality (DUAL), moderate the relationship between capital structure

(CSV) and firm performance (FPM) in real estate companies listed on the HoSE, Vietnam. This finding represents *"a novel contribution"* compared to the studies by Naseem et al. (2020) and Supriyanto & Kho (2022).

5.1.2 Conclusions Regarding Research Objective and Question 2

Capital structure (CSV) has a negative (−) effect on firm performance (FPM), with an effect coefficient of −0.429.

Effects of CEO Age (AGE): CEO age (AGE) negatively (−) affects capital structure (CSV) and positively (+) affects firm performance (FPM). AGE also exerts a partial positive (+) indirect effect on FPM through capital structure (CSV). Furthermore, AGE negatively (−) moderates the relationship between CSV and FPM, intensifying the negative effect as AGE increases; AGE has a negative (−) effect on capital structure (CSV) with a coefficient of −0.131; AGE has a positive (+) direct effect on firm performance (FPM) with a coefficient of 0.134; AGE has a partial positive (+) indirect effect on FPM through CSV, with an indirect effect coefficient of 0.056; AGE negatively (−) moderates the relationship between CSV and FPM, with a moderating effect coefficient of −0.260.

Effects of CEO Duality (DUAL): Empirical evidence indicates that CEO duality (DUAL) positively (+) moderates the relationship between CSV and FPM, such that an increase in DUAL weakens the negative (−) effect of CSV on FPM. The moderating effect coefficient of DUAL is 0.824.

Effects of Control Variables: Growth (GROW) positively (+) affects firm performance (FPM), with a coefficient of $\beta = 0.190$; Asset utilization (UTI) positively (+) affects FPM, with a coefficient of $\beta = 0.459$; Firm size (FSIZE) positively (+) affects FPM, with a coefficient of $\beta = 0.127$.

5.2 IMPLICATIONS

5.2.1 For Real Estate Companies

5.2.1.1 Implications related to Chief Executive Officers

Regarding CEO Age: The findings indicate that CEO age (AGE) has a positive (+) effect on firm performance and a partial positive (+) indirect effect through capital structure. Conversely, CEO age also negatively (−) moderates the relationship between capital structure and firm performance, such that an increase in AGE strengthens the negative (−) effect of capital structure on firm performance. This implies a less efficient use of financial leverage. Based on these results, it is recommended that the age of the CEO should not exceed the sample mean of 49 years to minimize the adverse moderating effect on capital utilization and overall firm performance.

Regarding CEO Duality: CEO duality (DUAL) positively (+) moderates the relationship between capital structure and firm performance. Specifically, when a CEO concurrently serves as the Chairman of the Board, the negative (−) effect of capital structure (CSV) on firm performance (FPM) is mitigated. Therefore, it is recommended that companies consider appointing the Chairman as CEO, while carefully assessing the associated risks of duality, to leverage its positive moderating effect on capital efficiency and firm performance.

5.2.1.2 Implications related to capital structure

Based on the research data, the average debt-to-equity ratio (DER) is 186.26%, with 32.93% of real estate companies in the sample exceeding this average. Currently, there are no government or banking regulations setting a maximum DER limit. Commercial banks typically provide loans up to 50% of project value, equivalent to 100% of the company's investment capital for the project. Therefore, the average DER of 186.26% is relatively high and implies potential risk associated with the capital structure, particularly for the 32.93% of companies exceeding this average. In a market downturn, liquidity risk and financial distress

are significant concerns due to the negative (−) effect of capital structure on firm performance.

Based on the practical context and research findings, companies are advised to determine an optimal capital structure that aligns with their capacity for effective capital utilization to minimize the adverse effects of debt on performance. Specific recommendations include:

Building an optimal capital structure: Consider an appropriate debt ratio relative to company growth and size. High-growth companies should prioritize long-term financing to maintain stable cash flow, whereas smaller companies should limit leverage to reduce bankruptcy risk.

Optimizing the cost of capital: Assess asset utilization efficiency before expanding operations or increasing debt. Use short-term capital to meet working capital needs and avoid long-term interest burdens.

Adjusting capital structure strategy by growth stage: During rapid growth, companies may accept a higher debt structure but must strictly manage associated risks. In stable stages, equity financing should be prioritized to reduce debt pressure.

Strictly controlling safety thresholds for capital Structure: Develop governance tools to monitor and control CEO risk-taking behaviors. Shareholders, through the Board of Directors and the Supervisory Board, can implement structural limits as a key mechanism to maintain overall corporate safety and control.

5.2.1.3 Other implications related to the research findings

Regarding Firm Size: The findings indicate that firm size positively (+) affects firm performance. Therefore, it is recommended that companies leverage their size advantages while simultaneously enhancing their capacity to utilize resources efficiently, thereby maximizing the positive effect of size on business performance.

Regarding Asset Utilization: The study also shows that asset utilization has a positive (+) impact on firm performance. Accordingly,

companies should optimize asset utilization to avoid resource wastage. Smaller firms, in particular, should focus on improving asset turnover ratios to enhance overall business performance.

Regarding Growth: The results indicate that firm growth positively (+) influences business performance. Hence, companies are advised to prioritize investment in growth initiatives, which will not only improve current performance but also strengthen long-term competitiveness and resource capabilities by expanding the company's scale and capacity.

5.2.2 Implications 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

The dissertation makes several contributions that expand existing scientific knowledge. Specifically: (i) New discoveries contributing to theory: This study confirms novel findings regarding the moderating effects of CEO characteristics (age and CEO-chair duality) on the relationship between capital structure and firm performance, addressing prior knowledge gaps. Additionally, it provides evidence for the partial mediating effect of CEO age on firm performance in real estate companies; (ii) Closing industry and geographical gaps: By applying the study to real estate companies in Vietnam, the dissertation contributes to narrowing industry- and geography-specific gaps in prior research on this topic; (iii) Application of a moderated mediation model: The research employs a moderated mediation model, which incorporates both mediation and moderation effects, distinguishing it from previous studies. For instance, Naseem et al. (2020) and Supriyanto & Kho (2022) examined only mediation effects, while Mokhtar (2023) focused solely on moderation. In this dissertation, CEO characteristics act as a second-stage moderator, a design rarely applied in Vietnam, making this a notable methodological contribution; (iv) Introduction of new control variables: The study incorporates two additional control variables compared with prior research: asset utilization (UTI) and growth (GROW); (v) Introduction of new measurement variables: *Firm performance (FPM),* the study uses ROA and ROS instead of Tobin's Q, as used in previous studies; *Capital structure (CSV)*, new measures include Debt-to-Equity Ratio (DER), Short-Term Debt to Total Assets (SDA), and Long-Term Debt to Total Assets (LDA); *Asset utilization (UTI),* measures include Tangible Assets to Total Assets (TAS), Fixed Assets to Total Assets

(FTA), and Total Asset Turnover (TAT); *Growth (GROW),* measures include Total Asset Growth (ASG) and Fixed Asset Growth (FAG).

This study reinforces and extends two foundational theories: *Upper Echelons Theory:* The findings confirm that CEO characteristics, such as age and duality, moderate the relationship between capital structure and firm performance through strategic decisions and operational management. This deepens the theory's core argument that the demographic and psychological traits of top executives shape organizational behavior and firm outcomes; *Agency Theory:* By analyzing the moderating role of CEO-chair duality, the study clarifies the effects of power concentration in corporate governance. The results suggest that, although traditional agency theory warns of potential conflicts of interest and lack of transparency, in certain contexts, power concentration may enhance decision-making efficiency and strategic capital structure use, demonstrating a more flexible interpretation of agency theory.

5.3.2 Methodological Contributions

The dissertation applied data analysis methods to a formative model, that has been rarely studied in the context of Vietnam. Specifically: *(i) PLS-SEM Analysis:* The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to test a moderated mediation model, in which the formative constructs included both continuous and binary indicators; *(ii) Using single indicator technique for CEO Characteristics:* The CEO characteristic constructs were decomposed into single indicator formative variables to ensure compatibility with the SmartPLS4 software; *(iii) Applying Formative Model Validation of Joseph F. Hair et al. (2017):* The formative model was tested following Hafiz Hanafiah (2020), while adhering to the variable assessment procedures recommended by Joseph F. Hair et al. (2017), as detailed in Appendices E and F; *(iv) Hypothesis Development of Moderated Effects:* The study applied Andersson et al. (2014) seven-

step framework for developing moderation hypotheses and compared it with the six-step framework of Vu Huu Thanh & Nguyen Minh Ha (2023). Furthermore, it drew upon Söderlund's (2023) the eight types of moderation models, which consider correlations with both independent and dependent variables. Based on these frameworks, the study proposed an innovative examination of the CEO's moderating effects, representing a novel contribution compared to previous research by Supriyanto & Kho (2022) and Naseem et al. (2020); *(v) Suggesting a Robust Theoretical and Analytical Framework:* The research developed a well-structured theoretical and analytical framework for *formative PLS-SEM models*, which can be used for in future research.

5.3.3 Practical Contributions

This study provides significant practical value by offering scientific evidence that stakeholders can apply in real-world contexts. The specific contributions include: *(i) Opening a new perspective in financial management aligned with CEO characteristics:* The research indicate that CEOs exert a strong influence on both capital structure decisions and firm performance. When selecting top executives, companies should consider not only experience and expertise but also the CEO's age and dual role as Chairman of the Board (DUAL). This consideration may helps companies to develop more effective in capital management strategies and human resource policies; *(ii) Supporting human resoure managemnet in senior executive recruitment:* Companies, particularly in the real estate sector, can apply the research findings to design policies, strategies, objectives, and processes for selecting, assigning, and supervising senior executives (CEO and Chairman) in alignment with the company's financial and governance strategies. This approach optimizes operational efficiency while minimizing risks associated with the interplay of capital structure, CEO characteristics, and firm performance. It also provides guidance on assessing the benefits and risks of CEO duality; *(iii) Providing an analytical framework for corporate decision-*

making: The research model proposes an applied analytical framework for formulating company policies and decisions regarding factors affecting firm performance, particularly capital structure and senior executive leaders. This framework can be used to enhance firm performance and corporate governance effectiveness; *(iv) Offering scientific evidence for stakeholders:* The study provides valuable reference for investors, shareholders, and credit institutions to better understand the CEO's role in capital structure decisions, investment strategies, and credit risk evaluation, as well as in monitoring corporate governance performance. Additionally, the findings offer valuable guidance to policymakers and regulatory agencies in establishing criteria for assessing corporate governance and management capabilities, particularly in high-risk industries with significant financial leverage, such as real estate. The research further proposes specific managerial and policy implications for practical application, serving as a useful reference for stakeholders in shaping policies related to capital structure and senior executive roles, including CEOs and Chairpersons (see Section 5.2).

5.4 LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

5.4.1 Research Limitations

This study has some limitations: (i) Data collection on CEO characteristics can only be collected in four quarters of 2023. Data is collected in cross-sectional form in four different quarters in 2023. This limitation is due to objective reasons to ensure consistency in CEO characteristics (avoid fluctuations due to CEO changes) and to allow some control over the time factor. Limiting data collection in 2023 is done to reflect the specific economic-policy context of the study, which is a period when the real estate market is very difficult and there are many policy interventions to support capital and policies from the Government. This is an important period to help highlight the risk management context and strategic decisions of companies, thereby increasing the practicality and significance of the study. On the other hand, the number of companies

with real estate business activities listed on the Ho Chi Minh City Stock Exchange (HoSE) is not large. Therefore, the study was only conducted with a small number of observations. This may be a limitation on the generalizability of the research results to other economic cycles of the real estate industry; (ii) The formative PLS-SEM model analysis method according to Hafiz Hanafiah (2020), with measurement variables being real numbers (which can have negative or positive values) has not been widely applied in Vietnam; (iii) The research variables have not considered exogenous factors that may affect business results; (iv) The measurement method of the variables is mainly based on previous studies, and has not tested new measurement methods for some measurement variables in the model; (v) The study is limited to the real estate industry, so the generalizability of the results is limited; (vi) The limitation of the convenience sampling method is that the characteristics of the surveyed companies may not fully reflect the overall survey population, which may limit the ability to generalize the results. Therefore, attention should be paid to overcoming this limitation in subsequent studies; (vii) Regarding the assumption of independence of observations, although each company is observed in many quarters, these observations are considered almost independent because strategic decisions and risk management are often planned and implemented by companies on a quarterly basis, depending mainly on the operating conditions and economic context of that quarter. Therefore, the assumption of independence between observations is considered to be basically met, in accordance with the requirements of PLS-SEM, which is flexible with small sample sizes and data that do not require normal distribution. This can also be considered one of the limitations of the study that needs to be addressed in subsequent studies.

5.4.2 Future Research Directions

Based on these limitations, the following directions are suggested for future research: Expand the sample to include a broader range of companies; Consider additional measurement variables for CEO

characteristics; Examine the characteristics of the chairperson or the board of directors; Extend the research to emerging markets or other high-leverage industries, such as banking, construction, or manufacturing.