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# QUYỀN LỰC CEO VÀ CẤU TRÚC VỐN – BẰNG CHỨNG TỪ VIỆT NAM

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## Tóm tắt

Trên cơ sở lý thuyết đại diện, bài viết này khám phá mức độ ảnh hưởng của quyền lực CEO đến đòn bẩy tài chính của các doanh nghiệp tại Việt Nam, một quốc gia đang phát triển nơi các nghiên cứu tương tự chưa được ghi nhận. Sử dụng phương pháp tiếp cận OLS cho một mẫu gồm 3.694 quan sát từ 323 công ty phi tài chính niêm yết công khai trên HNX từ năm 2008 đến năm 2019, nghiên cứu cho thấy mối quan hệ phi tuyến tính có thể tồn tại giữa quyền lực của CEO và cấu trúc vốn, gợi ý rằng mối liên kết đó có thể thay đổi tương ứng với lượng quyền lực do các CEO sở hữu. Cụ thể, chúng tôi nhận thấy rằng những CEO có ít quyền lực hơn có thể có xu hướng sử dụng nhiều đòn bẩy hơn khi quyền lực của họ tăng lên, trong khi điều ngược lại lại đúng với những CEO có mức quyền lực cao. Ngoài ra, nghiên cứu phát hiện ra rằng ảnh hưởng của tính độc lập của hội đồng quản trị đối với mối quan hệ nói trên nói chung là không đáng kể.

**Từ khóa:** Lý thuyết đại lý, Cấu trúc vốn, Quyền lực CEO, Mối quan hệ phi tuyến tính, Việt Nam

# CEO POWER AND CAPITAL STRUCTURE – EVIDENCE FROM VIETNAM

## Abstract

On the basis of agency theory, this paper aims to explore how powerful CEOs affect firm capital leverage in the context of Vietnam, a transitional developing nation in which similar research has not been recorded. Employing OLS approach for a sample of 3,694 observations from 323 non-financial publicly listed firms on HNX from 2008 to 2019, the study suggests that a non-linear relationship may exist between CEO power and capital structure, indicating that such linkage may vary corresponding to the amount of power commanded by the CEOs. In specific, we found that CEOs with less power may tend to adopt more leverage as their power increases, while the contrary is true for CEOs with high levels of power. Additionally, the study discovers that the weakening effect of board independence on the aforementioned relationship is generally insignificant.

**Keywords**: Agency theory, Capital structure, CEO power, Non-linear relationship, Vietnam

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## 1. Introduction

First presented by Grossman and Hart (1982) and later developed by Jensen (1986), Harris and Raviv (1990), and Stulz (1990), the debt-monitoring hypothesis suggests that managers may avoid using debt since a higher debt ratio places stricter boundaries on their discretions. In specific, debt reduces the amount of free cash flow in the hands of managers, forces them to work harder, and restricts them from making sub-optimal investment choices, or else the firm may face the risk of bankruptcy. In contrast, top managers may voluntarily increase the use of debt to avoid share dilution, consolidate their equity voting power and prevent threats from takeovers (Stulz, 1988; Harris and Raviv, 1988). To examine the given relationship, numerous studies concerning the impact of Chief executive officers (CEOs) or top managers' personal traits on a firm's financial structure have been conducted (Cronqvist et al., 2012). Our paper complements this work since we focus on the CEOs' formal (structural) power instead of the informal (non-structural) power. In specific, we aim to investigate how powerful CEOs influence corporate leverage thanks to the formal power coming from their title and position.

Widely regarded as the most powerful organizational member in the modern corporation (Harrison et al., 1988; Daily, 1997; Pearce, 1981; Hosmer, 1982), the CEO typically reports to the board of directors and is in charge of managing the company towards the ultimate goal of maximizing the business's value (Lin, 2014). As the highest-ranking executive, CEOs hold high responsibility in making key operating decisions. Thus, the CEO's will and relative power may profoundly affect the firm's capital structure, one of the most fundamental concerns for a firm's development.

The extent to which the CEO exerts power may depend on the board of directors. Firms with weak boards exhibit weak monitoring, thus promote CEO entrenchment. In contrast, a strong board limits the CEO's opportunism and ensures proper management. A strong board is also expected to have high independence, reflected by a higher percentage of independent board members. This is because these members could increase the effectiveness of managers' decision-making by exercising their duties of advising and supervising without colluding with the management team to expropriate residual claimants (Fama and Jensen, 1983). Thus, board independence may have a moderating effect on the relationship between CEO power and corporate leverage.

In the context of this study, we will investigate the influence of powerful CEO on leverage and the moderating role of board independence on such relationship in Vietnam, a small developing nation with a unique political setting, institutional background, and cultural environment in which similar research has not been conducted. First, Vietnam is in transition period from centralized market to market economy, thus its legal and institutional structure are underdeveloped compared to that of developed nations. Second, as Vietnamese stock market is in the early phase of development with relatively high information asymmetries and uncertainties, most domestic enterprises are still depending on bank credit as a major source of external financing (Vo, 2017). The study is expected to make the following contributions. First, by employing a new dataset of Vietnamese listed firms, our study contributes to the scared existing literature topic in this field. Second, our results support the non-linear link between CEO power and capital structure, hence ascertaining that such a relationship may persist in transnational and/or emerging nations.

The remaining part of this paper is structured as follows. Section 2 reviews the literature base and develops the hypotheses. Section 3 presents data and methodology. Section 4 discusses the empirical results and section 5 provides concluding remarks.

## 2. Literature review and Hypothesis development

Agency theory is widely employed by scholars to interpret the relationship between executives' behaviors and financial leverage. First introduced by Ross (1973) and later advanced by Jensen and Meckling (1976), the theory analyzes the conflicts of interest between the principal (shareholders) and the agent (managers) of the firm. While managers are supposed to act in the best interest of shareholders, they are tempted to maximize their own benefits at the expense of shareholders. As a result, the executive team commanded by the CEO may adopt the sub-optimal capital structure and the actual leverage level of the firm may be a compromised decision (Morellec et al., 2012). Even though the agency theory implies that the firm's leverage may deviate according to manager's wish, it is still uncertain whether the executive would prefer too much or too little leverage (Berger et al., 1997; Jiraporn et al., 2012).

On the one hand, a number of researchers opine that powerful CEOs tend to avoid using debt as debt can be seen as an internal control mechanism restricting their discretions and investment's expenditures (Jensen, 1986; Stulz, 1990). As issuing debt is a commitment of the firm to repay the loan with regular interest payments, debts reduce the free cash flow in the hand of CEOs and impose the pressure of bankruptcy risks on them (Grossman & Hart, 1982; Jensen, 1986; Zwiebel, 1994). In addition, after entering the debt contracts, the firm is accountable to operate within the rules embedded in debt covenants, which may include being monitored by and reporting to creditors. Thus, debt issuance will help to limit top managers' engagement in self-interested behaviors to maximize their own benefits at the expense of shareholders (Grossman & Hart, 1982; Jensen, 1986). Besides, CEO and other executives are often more risk-averse than shareholders because they face a high level of unsystematic risk due to their limited and undiversified human capital investment in the firm (Amihud & Lev, 1981; Fama, 1980). Their risks depend more on the firm's performance than those of shareholders, who normally hold a diversified portfolio and do not depend on the firm for employment. This additional risk aversion is hypothesized to provide a greater impetus for the CEO to reduce debt level as well as the probability of bankruptcy (Hunsaker, 1999). Since financial exhaustion or bankruptcy can lead to job dismissal, reputational damage, and future income reduction, it is argued that the management team has the motives to reduce debt to the sub-optimal level (Friend & Lang, 1988; Friend & Hasbrouck, 1988). Aligned with the management entrenchment hypothesis, which states that as managers' power increases, they tend to engage in selfish behaviors that harm the organization for their own benefit (Morck et al., 1989), various empirical studies suggest that powerful executives may have higher motivation and ability to downwardly adjust firm's financial leverage (see also Friend & Lang, 1988; Berger et al., 1997; Morellec et al., 2008).

On the other hand, powerful executives might voluntarily use more than the optimal level of debt to avoid share dilution, consolidate their equity voting power and avoid threats from takeovers (Stulz, 1988; Harris & Raviv, 1988). As CEOs become more powerful due to their high contribution to the firm success, they may also become more optimistic and over-confident about their ability. As a result, they may overestimate the accuracy of their judgement concerning the future prospects of the firm and may tend to use financial leverage more aggressively (Ben-David

et al., 2013; Hackbarth, 2008). In addition, the CEO title may provide the CEO with high self-esteem and satisfaction in terms of remuneration, recognition, social status, reputation, and achievement. In order to retain their glory, CEO may tend to adopt more leverage and engage in overinvestment with the aim to work in the shareholders' best interests and maximize the value of the firm. The above-mentioned points of view suggest that there may be a positive relationship between the power of CEO and the firm's financial leverage.

Within the field, an earlier study by Jiraporn et al. (2012) investigate the influence on variation in capital structure based on the agency theory. The results indicate that powerful CEOs tend to use less debt, which is consistent with their disfavor for disciplinary mechanisms associated with debt financing and their risk-averse attitude due to under-diversification. Contradicts to this view, a number of researchers suspect that the influence of CEO power on firm leverage is more complex than the simple monotonic relation (Zwiebel, 1994; Berger et al., 1997). In line with this perspective, an empirical study conducted by Chintrakarn et al. (2014) using a sample of non-financial firms in the United States discovers an inverted U-shaped relationship between CEO power and firm leverage. The study also proposes that firms with relatively weak CEOs possessing less decision-making power tend to employ higher leverage levels. This is explained by the fact that capital structure choices are more influenced by other stakeholders, such as the board of directors (BOD). Consequently, the firm tends to use more debt to alleviate the agency costs arising from conflicts of interest between the CEO and shareholders. However, when CEO power is sufficiently consolidated and reaches a certain threshold, he or she is more likely to adjust the firm's leverage downward in an attempt to pursue personal benefits and avoid the disciplinary role of debt financing. More recent empirical studies concerning non-financial Chinese small and medium-sized enterprises (SMEs) seem to support this idea (see also Li et al., 2017; Chao et al., 2017). In general, these studies accentuate that the relationship between CEO power and capital structure may not be exactly one-way, but rather non-linear. That is, the effect may be consistent with both views, or that CEO power can both positively and negatively relate to firm leverage. Nevertheless, studies on this relationship are relatively scarce and are mainly conducted on large economies like the United States or China.

Considering the aforementioned theories and empirical findings, we expect that the effect of powerful CEOs on the capital structure of publicly listed companies in Vietnam is non-linear. Thus, the first hypothesis is developed as below.

**H1:** There is a non-linear relationship between CEO power and capital leverage

Powerful managers, typically the CEO, may use their power and superior insights of the firms to dilute the board's ability to offer independent judgment (Fama and Jensen, 1983). However, the effect of CEO power on a firm's key decisions such as leverage choice may be influenced by corporate governance. Following the agency theory, independent directors may act as one of the key corporate governance mechanisms since they should have no material personal interest related to the firm and help to supervise the management more effectively. In this way, the presence of independent directors may reduce agency costs and limit the firm's devaluation resulting from executives' self-serving behaviors such as sub-optimal capital choices (Fama and Jensen, 1983; Bhojraj and Sengupta, 2003). As these investors could threaten the CEO's power by better monitoring, we expect more efficient management and fewer misbehaviors of the executive team.

Thus, a more independent board of directors may have a negative influence on the relationship between CEO power and capital structure. This results in the second hypothesis:

**H2:** A higher board independence weakens the effect of powerful CEOs on capital leverage

In light of the aforementioned facts, the authors propose the below regression models to test H1 and H2 (see Table I for a detailed description of all variables).

$$\begin{aligned} \text{BVLV}_{it} = {} & \alpha + \beta_1 CEOP_{it} + \beta_2 CEOP_{it}^2 + \beta_3 INDEP_{it} + \delta_4 FAGE_{it} + \delta_5 FSIZE_{it} + \delta_6 PROF_{it} \\ & + \delta_7 TANG_{it} + \delta_8 NDTS_{it} + \delta_9 EFFTAX_{it} + \sum IND + \sum YEAR + \mu_{it} \end{aligned}$$

$$\begin{aligned} \text{BVLV}_{it} = {} & \alpha + \beta_1 CEOP_{it} + \beta_2 CEOP_{it}^2 + \beta_3 CEOP_{it} \text{ X } INDEP_{it} + \beta_4 CEOP_{it}^2 \text{ X } INDEP_{it} \\ & + \beta_5 INDEP_{it} + \delta_6 FAGE_{it} + \delta_7 FSIZE_{it} + \delta_8 PROF_{it} + \delta_9 TANG_{it} + \delta_{10} NDTS_{it} \\ & + \delta_{11} EFFTAX_{it} + \sum IND + \sum YEAR + \mu_{it} \end{aligned}$$

## 3. Data and Methodology

### *3.1 Sample and data*

The study employs a panel dataset comprising data of all non-financial firms listed on the Hanoi Stock Exchange (HNX), one of the two major stock exchanges in Vietnam. Firms in the financial sector (banks, insurance firms, investment funds, and securities companies) are excluded from the sample for the following reasons. First, these entities possess prominently distinct financial statements (Al-Najjar & Hussainey, 2011). Second, their ownership structure is subject to special accounting treatment and regulation. Third, financial firms are often riskier and use higher leverage levels due to their special mode of operation. The study sample is collected over a period of 11 years from 2008 to 2019 and consists of 323 non-financial enterprises with a total of 3,694 observations.

Data concerning the characteristics of CEOs are hand-collected from the official income statements, management reports, and public releases printed on the companies' websites. Financial data of enterprises listed on HNX are aggregated by Fiinpro from the consolidated financial statements from 2008 to 2019, including the data from the balance sheet, income statement, cash flow statement, and note to financial statements. Fiinpro is considered one of the most comprehensive and insightful financial database providers in Vietnam whose sources are from the official website Hanoi Stock Exchange (www.hnx.vn) or Ho Chi Minh Stock Exchange (www.hsx.vn).

### *3.2 Methodology*

#### *3.2.1. Capital structure*

In general, capital structure or leverage can be measured by two main methods, book value-based leverage (book leverage) and market value-based leverage (market leverage). While book leverage is defined as the ratio of debt at book value over the sum of debt and equity at book value, market leverage is defined as the ratio of debt at book value over the sum of debt at book value and equity at market value. In this study, the book leverage measurement is employed for the following reasons. First, previous literature indicates that executives tend to utilize book values when making financing decisions because of their less volatile nature (Graham & Harvey, 2001). Second, using market value-based leverage may create significant noise to capital structure

decisions in inefficient stock markets such as Vietnam, where the weak form of efficiency has not been achieved (Munir & Li, 2016; Nghia & Blokhina, 2020).

*3.2.2. CEO power*

The concept of CEO power is defined in many different ways based on the researcher's point of view. According to Haleblian & Finkelstein (1993), this is "the CEO's ability to overcome internal resistance and continuously influence important decisions within the firm". Pfeffer (1997) complements this by mentioning that the objection may come from within or outside the firm. Combining both views, we employ Nanda *et al*. (2013)'s concept stating that CEO power is "the CEO's ability to overcome resistance and consistently influence the firm's important decision".

CEOs can exercise their authority based on both formal (structural) and informal (non-structural) power (Pfeffer, 1992). However, the power base can be contested, as the executive is challenged by both internal and external factors. The CEO's formal power comes from their title and position in the organizational structure and provides a legitimate basis for the CEO to influence corporate decisions (Ocasio, 1994). According to Finkelstein (1992), chief executives have higher structural power relative to other subjects, allowing them to influence major decisions and allocate resources in a way that suits their interests. Meanwhile, CEO's informal power is considered a personal characteristic, connected with individual's prestige, competence, experience, and personality (Finkelstein, 1992).

In the context of this study, the level of CEO's power is captured by creating an index based on the characteristics of three formal (structural) power-related variables, including CEO duality, CEO on Board, and CEO Ownership (see Table I for a detailed description of all variables).

CEO on Board: CEOs who sit on the board can enjoy greater privilege and influence among board members, especially in the case where he/she is the only insider (Finkelstein, 1992; Ocasio, 1994). Because the board of directors is liable for supervising the CEO, complexities and conflicts of interest may arise as CEO's power consolidates.

CEO Duality: When the CEO accumulates both titles of Chairman and CEO, he/she is expected to acquire additional power thanks to the higher structural position. Thus, he/she is more likely to exert higher influence over corporate decisions since the Chairman often plays a vital role in strategic decision making (Adams *et al*., 2005). In the past, the state that CEOs also chair the board has been common in Vietnamese listed firms. However, under Decree 71/2017/ND-CP, from August 1$^{st}$, 2020: The Chairman of the Board of Directors cannot concurrently hold the position of Chief Executive Officer (CEO) of the same public company.

CEO Ownership: Agency theory implies that when CEO possesses a higher ownership stake, his/her decision-making power increases while the potential conflict of interest between CEO and shareholders decreases. Such power derives not only from pure voting power but also from unobservable dimensions such as status within firm and board (Morck et al., 1988). Yet the higher power may lead to self-serving behaviors (Munir & Li, 2016). Pursuant to Vietnamese Law on Securities in 2019, a CEO in a joint-stock company with 5% or more of the voting shares is considered a major shareholder.

*3.2.3. Board independence*

Prior to 2012, the corporate governance practices in Vietnam remained relatively weak. At that time, the law term "independent" was synonymous with "non-executive" and there had been no specific requirements on board independence of Vietnamese listed firms. However, Vietnam had taken steps to improve its practices. The year 2012 witnessed a corporate governance reform with the issuance of Circular 121/2012/TT-BTC (hereafter, Circular 121) in which the definition, standards, and requirement of board independence were stated. Ever since the law has obliged that one-third of the board of directors in listed companies should be independent directors. In this study, the impact of the independent board members on the relationship between CEO power and financial leverage is investigated. The moderating variable is measured by the percentage of outside directors, while the interaction consists of the individual interaction terms of the power index-related variables and the board independence variable.

*3.2.4. Control variables*

In addition to the main explanatory variables mentioned above, we also employ other important control variables which are commonly used in previous empirical studies in the Vietnam context (Nguyen *et al.*, 2014; Nguyen *et al.*, 2017, Vu *et al.*, 2020). Specifically, the control variables in this study include firm age, firm size, growth opportunity, profitability, tangibility, non-debt tax shield, and effective tax rate (see Table I for a detailed description of all variables).

**Table 1.** Variable Description

| Variable | Symbol | Measurement |
|---|---|---|
| **Dependent variable** | | |
| **Book value-based leverage** | BVLV | Ratio of debt at book value over the sum of debt and equity at book value |
| **Explanatory variable** | | |
| **CEO on Board** | CEOBOD | A dummy variable equals to 1 if the CEO sits on board and 0 otherwise |
| **CEO duality** | CEODUAL | A dummy variable equals to 1 if the CEO chairs the board and 0 otherwise |
| **CEO ownership** | CEOMJSH | A dummy variable equals to 1 if the CEO is a major shareholder (owns 5% or more of the voting shares) and 0 otherwise |
| **CEO power index** | CEOP | Average of the afore-defined formal power-related variables |
| **Moderating variables** | | |
| **Board independence** | INDEP | Percentage of outside directors |
| **Control variables** | | |
| **Firm age** | FAGE | Years since establishment |
| **Firm size** | FSIZE | Natural logarithm of total assets in book value |

| Variable | Symbol | Measurement |
|---|---|---|
| **Growth opportunity** | GROWTH | Annual percentage change in sales |
| **Profitability** | PROF | Profit after tax divided by average shareholder's equity in book value |
| **Tangibility** | TANG | Total fixed assets divided by total assets in book value |
| **Non-debt tax shield** | NDTS | Book value of depreciation divided by book value of total assets |
| **Effective tax rate** | EFFTAX | Annual depreciation expenses divided by book value of total assets |
| **Industry** | INDUSTRY | Industry dummies |
| **Year** | YEAR | Year dummies |

**Source:** The research group's data

## 4. Empirical Results

### *4.1 Descriptive statistics*

Table II presents summary statistics of all related variables from 2008 to 2019 while table III indicates pairwise correlations. Over the period, the book value-based leverage has a mean and median value of 0.22 and 0.18, respectively. This is in line with the outlook of the Vietnamese Ministry of Finance, stating that Vietnamese firms tend to use less debt compared to firms in other countries of the same region. This can be explained by the following reasons. First, the interest rate of bank loans and corporate bonds in Vietnam has been relatively high and the return on investment may not be enough to cover such expensive debts (Vu *et al.*, 2020). In fact, from 2008 to 2019, the average lending interest is approximately up to 10.4%, while firms may gain an average rate of return merely from 6% to 8% for projects. Second, frequent changes in macroeconomic policies and uncertainties in the Vietnamese emerging market make banks reluctant to offer long-term loans (Vu *et al.*, 2020). Third, Vietnamese firms may need to downwardly adjust their debt usage to take full advantage of the interest tax shield. This is because under the amended Law on Enterprises, since January 1st, 2016, excess interest expense of businesses whose D/E ratio is higher than a specified level will not be tax-deductible. The cap of firms in the manufacturing sector is 5:1 while that of the remaining sectors is 4:1. Since January 1st, 2019, this rate has been further lowered to 4:1 and 3:1, respectively.

Concerning the CEO power index, 50% of the data lie below one-third, and 75% of the data lie below two-thirds. In other words, half of the CEOs possess at least one over three formal power units and a quarter of the CEOs possess from two to three-thirds power units.

Mentioning the board independence, it is notable that up to 75% of the observations are incompliant with the "1/3 rule"[2]. This very high rate can be explained as follows. During the five

[2] Since the issuance of Circular 121 dated July 26th, 2012, one-third of the board of directors in listed companies are obliged to be independent directors.

years of this provision's effective time following Circular 121, the authority had encouraged businesses to voluntarily comply, but sanctions have not been applied. Until the issuance of Decree 71/2017/ND-CP (hereafter, Decree 71), the regulation has become fully mandatory and firms would be fined from 70 to 100 VND million if they fail to comply with such provision.

**Table 2.** Summary Statistics

| | N | Mean | SD | Min | Q1 | Median | Q3 | Max |
|---|---|---|---|---|---|---|---|---|
| BVLV | 3,680 | 0.22 | 0.19 | 0.00 | 0.03 | 0.18 | 0.35 | 1.76 |
| CEOP | 2,900 | 0.49 | 0.25 | 0.00 | 0.33 | 0.33 | 0.67 | 1.00 |
| INDEP | 2,970 | 0.17 | 0.21 | 0.00 | 0.00 | 0.04 | 0.33 | 1.00 |
| FAGE | 3,694 | 22.67 | 14.73 | 0.00 | 11.00 | 19.00 | 32.00 | 65.00 |
| FSIZE | 3,680 | 26.31 | 1.33 | 21.53 | 25.48 | 26.22 | 27.12 | 31.09 |
| GROWTH | 3,324 | 0.45 | 5.63 | -1.00 | -0.06 | 0.09 | 0.27 | 244.46 |
| PROF | 3,680 | 0.12 | 0.24 | -8.66 | 0.05 | 0.11 | 0.19 | 4.35 |
| TANG | 3,680 | 0.25 | 0.21 | 0.00 | 0.09 | 0.20 | 0.38 | 0.98 |
| NDTS | 3,678 | 0.10 | 0.12 | -0.03 | 0.02 | 0.07 | 0.13 | 1.97 |
| EFFTAX | 3,679 | 0.20 | 0.38 | -2.34 | 0.13 | 0.20 | 0.25 | 13.53 |

**Source:** The research group's data

**Table 3.** Pairwise Correlations

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| (1) BVLV | 1.000 | | | | | | | | | |
| (2) CEOP | 0.024 | 1.000 | | | | | | | | |
| (3) INDEP | -0.031 | 0.036 | 1.000 | | | | | | | |
| (4) FAGE | 0.080 | 0.017 | -0.078 | 1.000 | | | | | | |
| (5) FSIZE | 0.392 | -0.127 | -0.099 | 0.194 | 1.000 | | | | | |
| (6) GROWTH | -0.020 | 0.017 | -0.022 | -0.052 | -0.017 | 1.000 | | | | |
| (7) PROF | -0.051 | 0.022 | 0.025 | 0.051 | -0.002 | -0.002 | 1.000 | | | |
| (8) TANG | 0.311 | -0.032 | 0.071 | 0.068 | 0.036 | -0.011 | 0.003 | 1.000 | | |
| (9) NDTS | - | - | 0.019 | 0.126 | - | - | 0.095 | - | 1.000 | |

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.021 | 0.047 | | | 0.045 | 0.033 | | 0.040 | | |
| (10) EFFTAX | - | - | - | 0.023 | 0.048 | - | - | - | - | 1.000 |
| | 0.009 | 0.017 | 0.006 | | | 0.017 | 0.004 | 0.021 | 0.002 | |

**Source:** The research group's data

### *4.2. Regression results*

The Pooled OLS model will be used in analyzing this study's panel data. Robust standard errors are also employed to deal with heteroscedasticity problems. The regression results of the three models (see table IV) indicate that F values are significant at the 1% level, suggesting that the regression analysis is meaningful. Model 1 tests the effect of control variables. The coefficients of firm age and profitability are negative and significant, consistent with previous research in the Vietnam market of Pham & Nguyen (2015); Dang & Duong (2019). Meanwhile, firm size and tangibility have a positive and significant impact on leverage, in line with empirical studies Le and Do (2017), Dang & Duong (2019).

Model 2 examines the relationship between the explanatory variable, CEO power, and the dependent variable, financial leverage. While the coefficient of CEO power is positive and statistically significant, that of its square term is negative and significant. This supports H1, which suggests that CEO power has an inverted U-shaped relationship with the firm's capital structure. The given result is also aligned with studies conducted in the US and China market of Chintrakarn *et al.* (2014); Chao *et al.* (2017); Li *et al.*, (2017). This relationship will be further explained. When CEO power is lower than a threshold value, he/she possesses less decision-making power and thus less ability in affecting the firm's capital structure in a way that suits his/her best interest. As a result, the CEO is more likely to obey decisions made by the shareholders (represented by the board of directors) in an attempt to maximize owners' interests (Adams *et al.*, 2005). Since the firm may prefer higher debt to reduce agency costs and limit powerful managers' from engaging in self-serving behaviors (Grossman & Hart, 1982; Jensen, 1986), the firm's leverage may increase as the CEO commands more power. In addition, when CEOs merely command low power, they may tend to adopt more leverage and engage in overinvestment with the aim to work in the shareholders' best interests and maximize the value of the firm. This is because they hope to accumulate more power thanks to the firm's outstanding performance. However, when their power is sufficiently consolidated and reaches a certain threshold, they are more likely to take advantage of their powers and manipulate the firm's leverage downward to pursue personal benefits. This behavior is consistent with their disfavor for disciplinary mechanisms associated with debt financing and their risk-averse attitude due to under-diversification.

Model 3 examines the moderating effect of board independence on the relationship between CEO power and capital structure. While the interaction term of the board independence and CEO power's coefficient is negatively and statistically significant, the interaction term of CEO power's square term and board independence is positively and insignificant. This suggests that board independence has a weakening effect on the inverted U-shaped relationship between powerful CEO and firm's leverage, though the effect is considered insignificant in general. This could be explained by the following grounds. First, the so-called "independent director" in Vietnam may

not truly be independent. In fact, prior to Circular 121 in 2012, the law term "independent" and "non-executive" were interchangeable, meaning that independent directors need not satisfy any other criteria besides being non-executive. Yet after Circular 121, in which the definition and criteria of independent board members are stated, the compliance has seemed to be formalistic due to the weak enforcement with no sanctions for violated firms[3]. Among the collected observations, it is notable that in most cases, the independent members stated in the firm's governance report do not meet the statutory standards required by law. Second, there is a lack of human resources in the Vietnam market to take on the position of independent board members, thus most candidates for this position do not have the necessary knowledge and experience to perform their roles and may have been nominated just to fulfill legal requirements. Combining with the fact that Circular 121 does not specify duties and require/recommend certain qualifications and of this position, the situation may be exacerbated (Nguyen *et al.*, 2019). Third, independent directors in Vietnam focus more on their advisory role than their monitoring role, hence their presence may not significantly limit the top management team's entrenchment (Nguyen *et al.*, 2019).

**Table 4.** Regression Results

| Variables | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| CEOP | | 0.167*** | 0.226*** |
| | | (0.0485) | (0.0555) |
| $CEOP^2$ | | -0.0937** | -0.127*** |
| | | (0.0402) | (0.0479) |
| $CEOP^2$*INDEP | | | 0.293 |
| | | | (0.220) |
| CEOP*INDEP | | | -0.475* |
| | | | (0.270) |
| INDEP | | -0.0204 | 0.125* |
| | | (0.0142) | (0.0703) |
| FAGE | -0.000584*** | -0.000629*** | -0.000647*** |
| | (0.000220) | (0.000217) | (0.000217) |
| FSIZE | 0.0603*** | 0.0618*** | 0.0619*** |
| | (0.00251) | (0.00253) | (0.00254) |
| GROWTH | -0.000155 | -0.000200 | -0.000205 |
| | (0.000253) | (0.000273) | (0.000276) |

[3] There had been no sanctions for violated firms until the issuance of Decree 71, in which the regulation has become fully mandatory and firms would be fined from 70 to 100 VND million if they fail to comply with such provision.

| Variables | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| PROF | -0.0603*** | -0.0623*** | -0.0622*** |
| | (0.0204) | (0.0207) | (0.0206) |
| TANG | 0.250*** | 0.254*** | 0.254*** |
| | (0.0144) | (0.0144) | (0.0144) |
| NDTS | -0.0260 | -0.0204 | -0.0219 |
| | (0.0210) | (0.0210) | (0.0211) |
| EFFTAX | -0.00369 | -0.00353 | -0.00336 |
| | (0.00599) | (0.00610) | (0.00595) |
| INDUSTRY | Controlled | Controlled | Controlled |
| YEAR | Controlled | Controlled | Controlled |
| Constant | -1.528*** | -1.616*** | -1.636*** |
| | (0.0736) | (0.0760) | (0.0757) |
| Observations | 2,815 | 2,815 | 2,815 |
| R-squared | 0.341 | 0.348 | 0.349 |
| F | 129.582*** | 84.351*** | 74.774*** |

*** p<0.01, ** p<0.05, * p<0.1

**Source:** The research group's data

## 5. Conclusion

This study analyzes the influence of powerful CEOs on corporate leverage. The findings suggest that CEOs with less power may tend to adopt more leverage as their power increases. This can be explained by two key points. First, they tend to obey the board by using more debt as a mechanism to alleviate the agency costs. Second, they may engage in overinvestment with the hope to accumulate more power thanks to the firm's outstanding performance. However, when their power is sufficiently consolidated to a certain threshold, they are more likely to entrench and manipulate the firm's leverage downward to pursue their own personal interests, which is aligned with their disfavor for disciplinary mechanisms of debt financing and their risk-averse attitude due to under-diversification. The study also discovered that board independence may weaken the impact of powerful CEO on a firm's financial leverage, though such weakening effect is generally insignificant.

Overall, the results reveal that the more power CEOs command, the more likely they are to manipulate financial leverage according to their wishes. As such behaviors may exacerbate agency costs and cause damage to the corporate value, Vietnamese publicly listed firms may need to employ stricter disciplinary mechanisms such as enhancing the operation of the board of directors and supervisory board and establishing functional committees within the board to alleviate the

problem. Also, the limited effect of board independence implies that this common governance practice may be counterproductive in the case of Vietnam, in which inadequate regulatory implementation may lead to inferior and formalistic compliance. For this reason, Vietnamese policymakers in specific and emerging nations' policymakers in general may demand better enforcement, more severe sanctions, and consider developing initiatives and reforms on corporate governance to ensure proper compliance, restrict the entrenchment of top executives, and protect the interests of shareholders.

Despite the efforts, this study has several limitations (1) Though the data comprises all non-financial firms on HNX (361 firms as of 2019), it may not be a fine representation of Vietnamese publicly listed firms. This is because there is a total of 801 firms on 3 stock exchanges in Vietnam including HOSE, HNX, UpCom (as of 2019) and the listing conditions for each exchange are very different. (2) The measurement of the CEO power index is relatively simple and merely considers formal sources of power, thus may not fully reflect the level of power accumulated by the CEO. Future studies may complement this paper by involving personal sources of power associated with CEOs' competence, background, and experience if the data is available (3) The law concerning independent board members has witnessed several substantial changes, hence the time period may need to be divided into different segments to make better judgement.

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