# THE IMPACT OF ECONOMIC UNCERTAINTY ON VIETNAMESE REAL ESTATE FIRMS' AGENCY COST

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**Abstract:** ***This study examines the impact of economic uncertainty on agency costs in Vietnamese real estate companies. Data from 122 listed firms on the Vietnam Stock Exchange (2011-2024) indicate that uncertainty reduces asset utilization, increasing agency costs. State-owned companies face greater challenges due to bureaucracy and risk aversion, despite political advantages.***

• Keywords: *uncertainty, state ownership, agency cost, moderating effects, Vietnam.*

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## 1. Introduction

Firms frequently encounter economic uncertainty, spanning from sporadic financial market disruptions and subtle monetary policy changes to major global events such as the 1997 Asian Financial Crisis, the 2008 Global Financial Crisis, and the COVID-19 pandemic. Adequate preparation against these uncertainties is crucial for firm survival and growth, with optimal corporate governance serving as a key component. Governance mechanisms must strike a balance between long-term value creation and short-term crisis adaptability. This equilibrium is complicated by agency problems, which arise from the separation of ownership and management. Owners (principals) bear monitoring costs (agency costs) as managers (agents) may pursue self-interested actions that diverge from shareholder goals (Jensen & Meckling, 1976). Uncertainty exacerbates these issues, negatively impacting firm performance.

Volatile macroeconomic conditions can diminish cash flow expectations and overall firm efficiency, with ripple effects on national economic growth. This is particularly relevant for the real estate sector, which drives economic expansion and social stability in developing nations. Understanding how uncertainty influences agency costs is crucial for illuminating sector-wide implications.

This study analyzes data from 122 listed Vietnamese real estate firms from 2011 to 2024, gaining added significance amid recent disruptions, such as COVID-19, which highlight the critical interactions among uncertainty, governance, and performance in Vietnam's real estate landscape.

Subsequent sections include literature review and hypotheses (2), methodology (3), results and discussion (4), and conclusions with implications (5).

## 2. Literature review and hypotheses development

### *Agency theory*

At its core, agency theory posits a separation of interests between shareholders (principals) and managers (agents), where differing objectives can lead agents to prioritize personal gains, necessitating costly monitoring by principals. While the complete eradication of agency costs is unattainable in separated ownership structures, factors such as ownership composition and governance practices can substantially alleviate them (Jensen & Meckling, 1976; Ang et al., 2000).

### *Uncertainty*

Uncertainty refers to managers' perceptions of environmental instability that impairs firm performance, erodes profitability, and elevates agency costs (Gordon & Narayanan, 1984). Studies demonstrate that macroeconomic uncertainty correlates negatively with leverage, prompting firms to curtail borrowing amid expected revenue declines and cash shortages, which in turn lower investment, efficiency, and heighten agency conflicts through impaired decision-making in production, investment, and financing (Baum et al., 2012).

*H1: Uncertainty positively correlates with agency costs in a firm.*

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***Interaction of uncertainty and state ownership on agency cost***

In emerging markets like Vietnam, state-owned firms often leverage political connections to gain advantages; however, they frequently deviate from profit-maximizing goals due to government oversight, inadequate incentives, and risk-averse priorities (Nguyen & Freeman, 2009). During times of uncertainty, these firms prioritize stability over high-return ventures, constrained by political and social mandates, leading to decreased asset efficiency and increased agency costs (Boubakri et al., 2013).

*H2: The positive relationship between state ownership and*

***Interaction of uncertainty and managerial ownership on agency cost***

Managerial ownership, defined as the percentage of shares held by executives such as the CEO, CFO, and COO, reduces asset misuse through information asymmetry and aligns interests, thereby fostering better asset utilization and lower agency costs (Singh & Davidson, 2003). In uncertain macroeconomic conditions, higher ownership discourages entrenchment behaviors, such as overinvestment, as managers bear greater personal risk, motivating them to be proactive in risk management and cost reductions (Florackis, 2008).

*H3: The negative correlation between managerial ownership and agency costs will be stronger during times of uncertainty.*

***Interaction of uncertainty and board of directors' characteristics (size and number of non-executive directors) on agency costs***

Board traits, including size and the presence of non-executive directors (NEDs), play a pivotal role in mitigating agency costs amid volatility. Larger boards offer expertise but suffer from coordination inefficiencies that delay decisions and dilute accountability in uncertain times (Jensen, 1993). Conversely, NEDs bolster independence, enhancing oversight to prevent short-term risky managerial choices and improve performance (Henry, 2010). Uncertainty thus moderates these dynamics, making compact, independent boards more adept at minimizing costs.

*H4: The negative relationship of board size with agency costs is stronger during uncertainty.*

*H5: The negative relationship of the number of non-executive directors with agency costs is stronger during uncertainty.*

## 3. Research methodology

### *3.1. Data collection*

Research data are collected from the websites of two Vietnamese Stock Exchanges and several websites of other securities companies. The research data covers all real estate companies listed on Vietnam's Ho Chi Minh City and Hanoi Stock Exchange between 2011 and 2024. The sample consisted of 122 companies, which corresponded to 1,708 observations. Other financial information is collected annually from the consolidated financial statements.

***Dependent variable:***

Ang et al. (2000) propose the total asset turnover (TAT) ratio as a measure of agency costs through residual losses, evaluating the efficiency of agents' assets. Low TAT signals investments in non-productive assets due to poor decisions or shirking, resulting in high residual losses amid severe conflicts (Singh & Davidson, 2003). This study employs inverse TAT, where higher values indicate greater agency costs.

***Independent variables***

Consistent with previous literature, the leading independent variables include a wide range of factors, are presented in Table 1, below:

**Table 1. Definition of variables**

| Variables | Definition |
|---|---|
| Uncertainty | Dummy variable denoting 1 for period of time with macroeconomic instability |
| State ownership | Percentage of total common share owned by the State |
| Managerial ownership | Percentage of common share owned by the managers of the firm |
| Board of directors' size | Number of directors within the board of director of the firm |
| No. of non-executive directors | Number of non-executive directors within the board of director of the firm |
| Firm age (control) | Age of the firm since its inception |
| Size (control) | Natural logarithm of the firm's total asset |
| Leverage (control) | Total Liability/total assets |

***Estimated model***

The panel data regression model is formulated to test research hypotheses with the following specific equation:

$$Agency_{it} = \beta_0 + \beta_1 UNC_{it} + \beta_2 STA_{it} + \beta_3 ManO_{it} + \beta_4 BOD_{it} + \beta_5 NED_{it} + \gamma_j Control_j + \theta_j Interaction_j + u_{it}$$

Where:

$Agency_{it}$ is a dependent variable showing the Agency cost (measured either by bonding, monitoring cost, or residual losses) in Firm i during time t;

$UNC$ – Dummy variable with period of uncertainty in Viet Nam denoting 1,

$STA_{it}$ - percentage of ownership of common share in firm i by the State of Viet Nam during time t,

$ManO_{it}$ - is the percentage share owned by executive officers in firm i during time t

$BOD_{it}$ - Number of directors within the board of directors in firm i during time t

$NED_{it}$ - Number of non-executive directors within the board of directors in firm i during time t

$Control_{j,}$ is a vector consisting of control variables, including firm's size (SIZE), age (Age) and leverage (DEBT)

$Interaction_{j,}$ is the vector of interaction variables calculated as the product of value of SO and the corresponding independent variable: $UNCSTA_{it}$ (Uncertainty x State Ownership), $UNCBOD_{it}$ (Uncertainty x Board size); $UNCNED_{it}$ (Uncertainty x Non-executive), $UNCMANO_{it}$ (Uncertainty x Managerial Ownership) and u is the error component.

### *3.2. Regression techniques*

The study employed panel data regression to examine the relationships between agency costs and corporate governance. Fixed- and random-effects models were tested; the Hausman test favored the fixed-effects (FE) model, rejecting the null hypothesis ($p < 0.05$), which indicated heteroskedasticity. After addressing heteroskedasticity and autocorrelation, Feasible Generalized Least Squares (FGLS) was applied to manage unequal variances and correlations.

## 4. Results and discussion

### *4.1. Research results*

*Descriptive analysis*

Descriptive statistics values, including mean value and standard deviation as well as the variables correlation matrix, are presented in Table 2 and Table 3:

**Table 2. Statistical summary**

| Variables | Observations | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Residual losses (Level) | 1708 | 0.8739744 | 1.19539 | 0 | 12.155 |
| Uncertainty (Dummy) | 1708 | 0.2479508 | 0.4319707 | 0 | 1 |
| SO (%) | 1708 | 0.173828 | 0.2362271 | 0 | 0.915 |
| Managerial ownership (ManO) (%) | 1708 | 0.0568873 | 0.1008029 | 0 | 0.761 |
| Board size (Person) | 1708 | 4.545765 | 1.584471 | 0 | 11 |
| Non-executive directors (Person) | 1708 | 2.937671 | 1.690867 | 0 | 9 |
| Age (Year) | 1708 | 20.53894 | 1.97052 | 0 | 60 |
| Size (Level) | 1708 | 0.5801571 | 0.219507 | 0.00002 | 1.748 |
| Leverage (Level) | 1708 | 13.67799 | 1.571181 | 9.896211 | 19.87463 |

Table 2 offers insights into financial and ownership metrics. State ownership averages 17.4% (standard deviation, SD, 23.6%), reflecting substantial dispersion. Managerial ownership averages 5.7% (SD 10.1%), showing moderate variability. Board size means 4.5 members (SD 1.6), NEDs 2.9 (SD 1.7). These variations highlight the importance of examining their interactions with agency costs.

**Table 3. Summary statistics and correlation matrix**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Residual losses | 1.000 | | | | | | | | |
| Uncertainty | -0.184*** | 1.000 | | | | | | | |
| SO | 0.366*** | -0.112*** | 1.000 | | | | | | |
| Managerial Ownership | 0.264*** | -0.028 | -0.001 | 1.000 | | | | | |
| Board Size | 0.031 | -0.408*** | 0.045* | -0.001 | 1.000 | | | | |
| Non-Executive Directors | -0.060** | -0.425*** | 0.000 | -0.142*** | 0.791*** | 1.000 | | | |
| Age | 0.021 | 0.074*** | 0.032 | -0.030 | -0.031 | -0.049* | 1.000 | | |
| Size | 0.146*** | -0.040 | 0.239*** | 0.098*** | 0.083*** | 0.033 | 0.016 | 1.000 | |
| Leverage | -0.269*** | 0.178*** | -0.075*** | -0.100*** | 0.186*** | 0.118*** | 0.002 | 0.155*** | 1.000 |

*Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

Table 3 shows correlations between independent variables below 80%, indicating no high multicollinearity. SO correlates significantly with residual losses ($p<0.01$).

*Panel regression*

For panel regression, controls (age, size, leverage) were included first (Model 1). FGLS then tested main independents (uncertainty, state ownership, managerial ownership, board size, NEDs) in Model 2. Interactions were added stepwise (Models 3-5) and fully (Model 6); results in Table 4.

**Table 4: Panel data regression for agency cost measured by residual losses**

| Determinants | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|---|---|---|---|---|---|---|---|
| Firm's Age | -0.00201 (0.00217) | -0.0020 (0.00217) | -0.00119 (0.00217) | -0.00202 (0.00217) | -0.00222 (0.00217) | -0.00201 (0.00217) | -0.00313 (0.00217) |
| Firm's Size | 0.159*** (0.0178) | 0.159*** (0.0178) | 0.159*** (0.0178) | 0.159*** (0.0178) | 0.159*** (0.0178) | 0.199*** (0.0178) | 0.179*** (0.0178) |
| Firm's Leverage | -0.512*** (0.129) | -0.510*** (0.129) | -0.512*** (0.129) | -0.522*** (0.129) | -0.514*** (0.139) | -0.512*** (0.159) | -0.512*** (0.129) |
| Uncertainty | | 0.486*** (0.719) | 0.462** (0.0834) | 0.485** (0.0816) | 0.706*** (0.117) | 0.792*** (0.178) | 0.601*** (0.178) |
| State Ownership | | -1.732*** (0.118) | -1.767*** (0.133) | -1.731*** (0.118) | -1.714*** (0.118) | -1.732*** (0.114) | -1.419*** (0.221) |
| Managerial Ownership | | -2.804*** (0.281) | -2.794*** (0.282) | -2.806*** (0.280) | -2.696*** (0.284) | -2.751** (0.282) | -2.293** (0.584) |
| Board of Directors' Size | | -0.0477 (0.0295) | -0.0470 (0.0296) | -0.0478 (0.0296) | -0.0418 (0.0296) | -0.00716 (0.0365) | -0.0383 (0.0400) |
| Number of non-executive directors | | 0.105*** (0.0281) | 0.104*** (0.0281) | 0.105*** (0.0281) | 0.127*** (0.0295) | 0.093*** (0.0218) | 0.083*** (0.0340) |
| Uncertainty x State Ownership | | | 0.163** (0.286) | | | | 0.311** (0.261) |
| Uncertainty x Managerial Ownership | | | | -0.102* (0.631) | | | -0.311** (0.261) |
| Uncertainty x Board of Directors' Size | | | | | -0.101 (0.0426) | | -0.442 (0.659) |
| Uncertainty x No. of non-executive directors | | | | | | -0.0768* (0.0407) | -0.0429** (0.0586) |
| Constants | -0.624*** (0.104) | -0.618*** (0.105) | -0.623*** (0.105) | -0.737*** (0.106) | -0.786*** (0.135) | -0.747*** (0.138) | 2.460*** (0.256) |
| Observations | 1,708 | 1,708 | 1,708 | 1,708 | 1,708 | 1,708 | 1,708 |

*Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

From Table 4, uncertainty is positively associated with residual losses ($\beta = 0.486$, $p < 0.01$, Model 2), indicating lower asset utilization and higher agency costs during uncertain periods, supporting H1. State ownership shows a stronger negative association with residual losses ($\beta = -1.767$, $p < 0.01$, Model 3). Still, uncertainty weakens this link ($\beta = 0.163$, $p < 0.05$, Model 3), confirming H2: uncertainty diminishes the agency cost-mitigating effect of state ownership. Uncertainty also moderates the relationship between managerial ownership and residual losses, increasing its negative association ($\beta = -0.102$, $p < 0.05$, Model 4), which supports H3. Board size has an insignificant negative relationship with residual losses (Models 5-6). NEDs have a positive impact on agency costs ($\beta = 0.093$, $p < 0.01$), but a negative interaction with uncertainty ($\beta = -0.0768$, $p < 0.05$) is observed, linking NEDs to lower costs during periods of volatility, which supports H5.

### *4.2. Discussion*

Unpredictable economic changes heighten volatility in micro and macro factors, harming firm growth and profitability (Bloom, 2014). This prompts managers to delay investments due to risk aversion, resulting in inefficient asset utilization and increased agency costs. Understanding the impact of uncertainty on agency costs is crucial for effective responses in critical sectors, such as real estate. In developing economies, weak legal systems enable managerial evasion of duties under risk-averse pretexts, complicating agency issues in varied ownership structures. Our study fills literature gaps by probing these interactions in Vietnam's real estate sector.

Findings indicate lower asset utilization in uncertain environments, which raises agency costs and aligns with managers' loss-minimizing behaviors that conflict with shareholder goals (Anh et al., 2024). In capital-intensive real estate, errors amid volatility exacerbate losses, intensifying aversion and curtailing investment.

State-owned firms benefit from political ties, which facilitate access to resources such as land (Nguyen & Freeman, 2009), thereby boosting revenues and reducing costs. Yet, uncertainty erodes this: managers become ultra-cautious due to the risk of mismanagement penalties, and bureaucracy limits flexibility, thereby increasing agency costs (Boubakri et al., 2013).

Uncertainty also shapes the role of managerial ownership: higher stakes align interests and enable swift adaptations in the face of instability. Non-executive directors (NEDs) further mitigate costs through independent oversight, aligning decisions with those of shareholders, and reinforcing operational and financial resilience in the face of volatility (Henry, 2010).

## Conclusion

Economic uncertainty significantly raises agency costs in Vietnamese real estate firms, especially state-owned ones, with implications for managers, regulators, and policymakers in developing contexts such as Vietnam. To adapt to crises, managers need contingency plans that bypass bureaucratic hurdles; owners should establish accountable yet flexible frameworks. The growth-driving role of real estate demands such agility for sector survival and economic stability.

Fostering an ownership culture through stock options aligns the interests of managers and shareholders, thereby reducing costs. Recruiting expert NEDs ensures oversight in volatility. Firms must train managers to make decisions under uncertainty and enhance their ability to adapt.

Policymakers should update regulations to create stable and transparent environments that curb risk avoidance and boost accountability. Reforming state firm governance reduces rigidity, thereby enhancing market responsiveness. Incentives such as tax relief or funding can spur investment, offsetting the aversion.

These steps create supportive settings, building resilience to volatility and advancing Vietnam's real estate stability and growth.

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