CORPORATE INVESTMENT- FOREIGN OWNERSHIP RELATIONSHIP AND THE ROLE OF LEVERAGE: THE CASE OF VIETNAM

MỐI QUAN HỆ GIỮA SỞ HỮU NƯỚC NGOÀI VÀ MỨC ĐỘ ĐẦU TƯ - VAI TRÒ CỦA ĐÒN BẨY: NGHIÊN CỨU CHO VIỆT NAM

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Abstract - This paper aims to investigate the relationship between corporate investment and foreign ownership, taking into account the indebtedness of firms. Using a sample of 669 Vietnamese quoted firms from 2010 to 2021, the System Generalized Method of Moments (i.e., system-GMM) is employed to investigate the relationship between investment and foreign ownership. The paper finds that foreign shareholding reduces corporate investment, and this influence is more pronounced in highly leveraged firms. The outcome suggests that in emerging markets like Vietnam, foreign investors focus on short-term returns so that, long-term investment is cut back to save resources for earnings pushing, leading to the so-called "under-investment problem". In the context of high debt levels, besides ensuring short-term profitability, firms have to prioritize debt repayment, making the tendency stronger.

Key words - Financial constraints; foreign ownership; investment; leverage; Vietnam

Tóm tắt - Bài báo này nhằm mục đích khám phá mối quan hệ giữa mức độ đầu tư của doanh nghiệp Việt Nam và sở hữu nước ngoài, có tính đến yếu tố tác động của nợ vay. Sử dụng mẫu gồm 669 công ty niêm yết từ năm 2010 đến năm 2021, kết quả cho thấy sở hữu nước ngoài có mối quan hệ ngược chiều với đầu tư của doanh nghiệp và ảnh hưởng này rõ rệt hơn ở các công ty có đòn bẩy tài chính cao. Điều này hàm ý rằng tại các thị trường mới nổi như Việt Nam, các nhà đầu tư nước ngoài thường tập trung vào lợi nhuận ngắn hạn, do đó, đầu tư dài hạn bị cắt giảm để tiết kiệm nguồn lực dành cho các hoạt động thúc đẩy thu nhập trong ngắn hạn, dẫn đến "vấn đề đầu tư dưới mức". Trong các công ty có mức nợ cao, bên cạnh việc đảm bảo lợi nhuận ngắn hạn, các công ty phải ưu tiên trả nợ, khiến hiện tượng này trở nên mạnh hơn.

Từ khóa - Sở hữu nước ngoài; đầu tư; đòn bẩy; hạn chế tài chính; Việt Nam

1. Introduction

Investment decisions aim to increase the value of firm owners by deciding sufficient capital allocation to form assets and investing in profitable projects. When firms invest at a sufficient level, they can achieve sustainable growth. According to M&M theory, investment decisions in the perfect market should only be decided by the availability of investment opportunities [1]. However, in the real world, there is a variety of factors, including ownership, that might affect corporate investment due to the existence of numerous market frictions. Firms with high foreign ownership often benefit from wider access to capital resources, advanced management skills, broader networks, and high technology brought by offshore investors [2]. In addition, by putting in place strong corporate governance, foreign investors contribute to the mitigation of agency problems and information asymmetry within firms, which in turn positively affect the effectiveness of decision-making [3]. Firms therefore are encouraged to take innovation and productivity processes, resulting in higher long-term growth and profitability (see [4]; [5]).

Although significant research effort has been made to discover the effect of foreign ownership on financial decisions, there are scant evidences of how ownership influences investment, taking into account the situation of external financing. Before us, [6] studied the impact of foreign ownership on innovation investment in China and found that the positive relationship between foreign ownership and innovation investment only exists if firms can access deeper domestic financial markets. This study motivates us to investigate the role of indebtedness in the relationship between offshore ownership and long-term investment level.

Our paper focuses on Vietnam – an emerging market currently drawing in foreign capital despite the fact that the high information asymmetry, weak corporate governance, and immature equity market continue to be problems. When investing in this equity market, foreign investors typically take on an active role in monitoring and controlling the companies they invest in. In situations where a firm is highly indebted, these foreign owners may intensify their oversight to ensure that resources are allocated and aligned with shareholder interests. This heightened monitoring can lead to increased capital expenditures aimed at fostering future growth and development. Conversely, if foreign investors prioritize short-term returns, this can hinder long-term investment. In highly leveraged firms, their focus can shift toward immediate profitability and debt repayment, which may result in reduced capital spending. Thus, while foreign ownership can potentially enhance investment through governance oversight, the need to manage debt can constrain long-term growth initiatives, creating a complex dynamic between foreign investment and corporate financing strategies. In order to explore deeper into these arguments and provide stakeholders with relevant policy implications, we conduct a study on comprehensive data of 669

Vietnamese quoted firms from 2010 to 2021. The outcome indicates that there is a negative link between firm investment and foreign ownership ratio; and in highly leveraged enterprises, this relationship becomes more evident.

2. Literature review and hypothesis development

2.1. The relationship between foreign ownership and firm investment

Researchers mainly depend on the theories of information asymmetry and agency issues to explain how ownership affects investment (see [7]; [8]). Agency theory [9] states that managers might not always behave in the best interests of shareholders, thus conflicts of interest may arise between these two parties. Under the fear of possible losses on their current positions or income or reputations, managers may forgo profitable projects. According to the asymmetric information hypothesis [10], managers and shareholders may act differently depending on the amount of information they have about projects. In many cases, managers have more information compared to outside investors, including foreign shareholders, thus they can make some misallocated investment decisions and then reduce firm value.

When examining the role of foreign ownership, [4] uses a sample of Spanish firms between 1990 and 2006 and finds that foreign shareholding enhances firms to take on more innovation-related projects. The authors argue that foreign ownership brings not only financial resources but also technological expertise and management practices, which can enhance a firm's innovation capabilities and stimulate investment in R&D. [3] explore a sample of firms in 64 countries and find that foreign investors significantly increase investment. It suggests that foreign investors may bring in additional capital and expertise, which can facilitate firms' expansion and investment in productive assets. For the Vietnam market, [11] documents that foreign ownership increases the level of investment in fixed assets.

Other studies have provided empirical evidence supporting the notion of a negative relationship between foreign ownership and investment level. For example, [12] finds that foreign ownership is associated with lower levels of investment in Japanese manufacturing firms. They explain that foreign investors are interested in projects that promise positive equity returns. In other words, they tend to prioritize short-term with highly expected gains over long-term investment, leading to lower capital expenditures. [13] also argue that the presence of foreign investors seeking to maximize returns puts managers under pressure to pursue short-term performance indicators, like higher earnings-per-share or profit-after-tax of the current term. Since short-term earnings' reduction is interpreted as a signal of potential performance problems; foreign owners who focus on short-term earnings tend to sell stocks following bad news. In that case, long-term investment is forgone to save resources for earnings pushing, in order to satisfy foreign investors' requirements [14]. [15] examines the Indian market and also finds that firms with high foreign ownership tend to invest less.

Depending on these mixed evidences, the first hypothesis is as follows:

H1a: There is a positive relationship between foreign ownership and investment.

H1b: There is a negative relationship between foreign ownership and investment.

2.2. The role of leverage

While considering the link between foreign ownership and corporate investment, the indebtedness situation should be taken into account [6]. Leverage, or the degree to which a firm is financed by debt, can significantly influence how foreign investors engage with a firm's final goals and its investment strategies.

On one side, off-shore owners often bring enhanced monitoring and governance practices [3], which can positively impact investment decisions, particularly in firms with high levels of indebtedness. In such contexts, these investors may implement stricter oversight to ensure that resources are utilized effectively and aligned with long-term growth objectives. Their involvement can encourage firms to increase capital expenditures, especially if foreign investors believe that strategic investments will yield substantial returns in the future. This could lead to a more proactive approach to corporate innovation and development, driven by the need to enhance competitiveness and profitability.

On the other hand, as mentioned earlier, if foreign investors focus on seeking short-term returns, long-term investment may be cut back to save resources for earnings pushing [13]. This is particularly concerning for firms facing significant financial obligations, as the necessity to prioritize debt repayment can overshadow their investment opportunities. In such cases, the foreign owners may reallocate funds away from investment to meet debt repayment commitments. Moreover, the influence of leverage on foreign ownership-investment can be predicted since foreign investors may view firms with high indebtedness as riskier investments, leading them to go away from funding long-term projects to avoid being tied to those firms for extended periods.

In summary, leverage plays a considerable role in the relationship between foreign ownership and firm investment levels. Thus, we propose the second hypothesis as follows:

H2: The effect of foreign ownership on investment is more pronounced in highly leveraged firms.

3. Methodology

3.1. Data

Our data is taken from the FiinPro database. We only include non-financial firms listed on HOSE and HSX for the period from 2010 to 2021. We exclude utility and financial institutions since they have many differences in operations and the way of listing financial information. After winsorizing all variables 1% in each tail, a final sample of 699 companies listed on the Vietnamese stock market from 2010 to 2021 is used to run regressions.

3.2. Model

Following previous research on the same topic such as [2], [6], [15], the model we use to examine the relationship between investment and foreign ownership is as follows:

$$INV_{i,t} = \beta_0 + \beta_1 INV_{i,t-1} + \beta_2 FO_{i,t-1} + \beta_3 LEV_{i,t-1} + \beta_4 CF_{i,t-1} + \beta_5 SIZE_{i,t-1} + \beta_6 Q_{i,t-1} + u_{i,t} \quad (1)$$

The capital expenditure ratio is used to measure the investment level of firm i in year t. The main explanatory variable is foreign shareholding, which is measured by the percentage of shares held by foreign investors. Leverage is the total debt over the total assets. Other variables' definitions and measurements are provided in Table 1.

Table 1. *Variable descriptions*

Variable	Definition	Measurement
CF	Cash flow	The sum of earnings before extraordinary items and depreciation/Total assets
SIZE	Firm size	Ln (Total assets)
Q	TobinQ	Market value of firms/ Book value of firms

To clarify the role of leverage, the Eq. (1) is run for two groups. These subsamples are classified based on the industry median value of leverage, which is estimated by industry and year. If a firm's level of debt is higher than the median value of the industry it belongs to, it goes to high-leveraged groups, otherwise, it goes to the low-leveraged category.

The lagged value of an investment is contained in Equation (1); hence, it should be estimated by the system-GMM technique [16]. By employing one-year-lagged independent variables as instruments, this estimator successfully handles potential endogeneity, such as omitted variables and simultaneous causation between investment and other determinants.

The statistics summary of all firm-level variables is provided in Table 2. As shown, the capital expenditures ratio of the observed firms is 14.2%, on average. The mean leverage is 22% and the foreign investors hold around 8.8% of total outstanding shares.

Table 2. *Descriptive statistics*

	Obs	Mean	Std. Dev.	Min	Max
INV	6,127	0.142	0.043	0.000	0.276
FO	6,127	0.088	0.130	0.000	0.490
LEV	6,127	0.220	0.186	0.000	0.691
CF	6,127	0.085	0.098	-0.100	0.523
SIZE	6,127	27.266	1.593	23.679	31.585
Q	6,127	0.746	0.541	0.000	3.252

To provide an overview of the correlation between variables, we perform a Pearson's correlation matrix. As can be seen from Table 3, all pairwise correlation coefficients between independent variables are below 0.8, so the model has a low risk of multi-collinearity.

Table 3. *The correlation matrix*

	INV	CF	SIZE	LEV	MTB	FO
INV	1.000					
FO	0.013	1.000				
LEV	-0.087	-0.086	1.000			
CF	-0.038	0.201	-0.322	1.000		
SIZE	0.080	0.265	0.373	-0.036	1.000	
Q	-0.075	0.190	0.002	0.459	0.146	1.000

4. Result

First, the Eq. (1) is estimated using the method of two-step system-GMM. Standard errors are shown in brackets and the signals of *, **, *** are denoted to the significance level at 0.1, 0.05, and 0.01, respectively. AR2 is second order serial correlation check and Hansen test is for over-identification restrictions.

Regression results for all firms and the non-COVID-19 period are presented in Table 4. The reason for conducting tests for a non-crisis period is the undeniable impact of the COVID-19 pandemic on the way firms make investment decisions, as shown by [17]. Thus, to alleviate the concern that COVID-19 can drive the regression results, besides the full-sample test, we exclude the two years 2020-2021 and re-run the Eq. (1). As shown in all columns of Table 4, the coefficients of FO are negative and significant at 1% level, suggesting that foreign investors discourage firms to take more investment. This outcome supports our hypothesis H1b. Interestingly, the coefficient of FO is higher for high-leveraged firms, implying the effect of foreign ownership is more evident when firms acquire a high level of debt. This outcome supports our hypothesis H2. When re-estimating the Eq. (1) for non-COVID-19 period, the findings remain unchanged.

Table 4. *Investment-foreign ownership relationship and the role of leverage*

	Full sample		Non-COVID-19	
	High-leveraged	Low-leveraged	High-leveraged	Low-leveraged
L.INV	0.7399***	0.8111***	0.7149***	0.7675***
	[0.0006]	[0.0016]	[0.0013]	[0.0042]
L.FO	-0.0047***	-0.0003***	-0.0041***	-0.0032***
	[0.0006]	[0.0009]	[0.0011]	[0.0017]
L.LEV	-0.0141***	-0.0101***	-0.0146***	-0.0049**
	[0.0007]	[0.0007]	[0.0014]	[0.0025]
L.CF	-0.0133***	-0.0163***	-0.0164***	-0.0117***
	[0.0006]	[0.0003]	[0.0014]	[0.0014]
L.SIZE	0.0007***	0.0006***	0.0008***	0.0007***
	[0.0001]	[0.0001]	[0.0001]	[0.0002]
L.Q	0.0024***	-0.0002***	0.0025***	-0.0006***
	[0.0001]	[0.0000]	[0.0003]	[0.0002]
Const.	-0.0144***	-0.0116***	-0.0144***	-0.0138**
	[0.0020]	[0.0019]	[0.0032]	[0.0056]
N	3081	3046	2459	2411
AR2	0.1766	0.1050	0.0759	0.1154
Hansen	0.2387	0.1889	0.2731	0.2107

In short, the results reveal that in Vietnam, foreign shareholding reduces corporate investment, and this influence is stronger in highly leveraged firms. The finding is consistent with [12], [13], [15]. In emerging markets which are characterised by uncertainty and information asymmetry like Vietnam, foreign investors may focus on seeking short-term returns on stocks rather than the long-term development of firms they invest in. As a result, capital expenditure is cut back to save resources for earnings improvement, leading to a reduction in investment level. In highly leveraged firms, this effect is even more pronounced. The existing debt obligations

create pressure to have immediate profitability, which can deter foreign investors from supporting projects that require substantial upfront capital but offer returns over a longer horizon. These investors may fear that the high levels of indebtedness could distort the firm's financial stability, leading them to prioritize immediate financial performance over long-term growth.

Additionally, Vietnam with some uncertainties like other emerging markets can even exacerbate this reluctance. Foreign investors may have limited access to reliable information about market conditions, competitive dynamics, and regulatory environments, making long-term commitments seem riskier. This means short-term gains become more attractive as they allow investors to realize returns quickly while minimizing exposure to potential downturns.

Next, we re-run the Eq. (1) on two sub-samples with different financial situations. Firms are classified into more- and less likely to be financially constrained groups since there are many differences in investment between the two groups of firms [18]. We depend on the deficit value calculated based on the guidance of [19] to separate firms into the two groups (Deficit = (dividend + investments + change in working capital - operating cash flow after interest and taxes)/ Total assets; If a firm's deficit value is larger than 0, it is financially constrained; and vice versa).

As shown in Table 5, the regression results still reveal the negative impact of foreign ownership on investment, and the effect is stronger for highly leveraged firms.

Table 5. *More- vs. less-financial constrained firms*

	More-constrained		Less-constrained	
	High-leveraged	Low-leveraged	High-leveraged	Low-leveraged
L.INV	0.7125***	0.7330***	0.3098***	0.4576***
	[0.0009]	[0.0017]	[0.0020]	[0.0005]
L.FO	-0.0070***	-0.0031***	-0.0046***	-0.0016***
	[0.0005]	[0.0005]	[0.0001]	[0.0003]
L.LEV	-0.0176***	-0.0168***	-0.0177***	0.0021***
	[0.0004]	[0.0004]	[0.0002]	[0.0001]
L.CF	-0.0085***	-0.0222***	-0.0253***	-0.0015***
	[0.0004]	[0.0007]	[0.0003]	[0.0002]
L.SIZE	0.0010***	0.0011***	0.0015***	0.0005***
	[0.0001]	[0.0001]	[0.0001]	[0.0000]
L.Q	0.0030***	-0.0001**	-0.0013***	-0.0016***
	[0.0001]	[0.0001]	[0.0000]	[0.0000]
Constant	-0.0190***	-0.0217***	-0.0305***	-0.0110***
	[0.0028]	[0.0030]	[0.0030]	[0.0003]
N	2561	2412	520	634
AR2	0.2785	0.0802	0.6848	0.3987
Hansen	0.2632	0.1591	0.7605	0.0584

As an additional test, we take into account the firm types since in Vietnam, the number of state-controlled firms is still large, and state-owned enterprises (i.e., SOEs) may have higher financial support from the government. According to the 2020 Vietnamese enterprise law, firms whose 50% or more shares are in the hands of the government are SOEs, otherwise, they are non-SOEs.

Table 6 presents regression results for the two groups of firms. Consistent with the previous tables, the negative effect of foreign shareholding on corporate investment is still found, and the discouragement influence of FO is stronger for SOEs. Between the high and low-leveraged firms of the two categories, the extent of the foreign ownership's effect is stronger for the high-leveraged firms.

Table 6. *SOEs vs. non-SOEs*

	SOEs		non-SOEs	
	High-leveraged	Low-leveraged	High-leveraged	Low-leveraged
L.INV	0.7239***	0.9630***	0.7366***	0.7486***
	[0.0002]	[0.0005]	[0.0005]	[0.0005]
L.FO	-0.0170***	-0.0054***	-0.0027***	-0.0008*
	[0.0001]	[0.0002]	[0.0004]	[0.0004]
L.LEV	-0.0072***	-0.0020***	-0.0177***	-0.0158***
	[0.0000]	[0.0001]	[0.0002]	[0.0005]
L.CF	-0.0112***	-0.0074***	-0.0159***	-0.0202***
	[0.0004]	[0.0002]	[0.0002]	[0.0002]
L.SIZE	-0.0009***	0.0008***	0.0010***	0.0006***
	[0.0000]	[0.0001]	[0.0000]	[0.0001]
L.Q	0.0014***	0.0004***	0.0027***	-0.0004***
	[0.0001]	[0.0000]	[0.0001]	[0.0000]
Constant	0.0310***	-0.0187***	-0.0193***	-0.0088***
	[0.0013]	[0.0014]	[0.0010]	[0.0020]
N	782	887	2299	2159
AR2	0.6555	0.7326	0.1001	0.1005
Hansen	0.6208	0.8767	0.0660	0.2051

Next, we take into account growth opportunities as the investment activities indeed are different significantly between firms with high- and low-growth opportunities [20]. We follow previous studies to use Tobin's Q to define firm growth levels. That is, firms having the Tobin's Q larger than 1 belong to the high-growth opportunities group and vice versa. As can be seen from Table 7, the negative coefficients of foreign ownership are found in all columns. Interestingly, in low-growth and low-leveraged firms, the FO is insignificant related to firm investment.

Table 7. *Firms with different growth opportunities*

	High growth		Low growth	
	High-leveraged	Low-leveraged	High-leveraged	Low-leveraged
L.INV	0.8659***	0.7414***	0.6521***	0.8306***
	[0.0015]	[0.0006]	[0.0016]	[0.0010]
L.FO	-0.0034***	-0.0007**	-0.0072***	-0.0003
	[0.0004]	[0.0003]	[0.0004]	[0.0007]
L.LEV	-0.0064***	-0.0205***	-0.0194***	-0.0076***
	[0.0006]	[0.0006]	[0.0006]	[0.0008]
L.CF	-0.0083***	-0.0117***	-0.0150***	-0.0197***
	[0.0007]	[0.0003]	[0.0004]	[0.0005]
L.SIZE	0.0001	0.0005***	0.0009***	0.0006***
	[0.0001]	[0.0001]	[0.0001]	[0.0001]
L.Q	0.0019***	0.0003***	0.0043***	-0.0009***
	[0.0002]	[0.0000]	[0.0001]	[0.0001]
Constant	0.0006	-0.0095***	-0.0169***	-0.0098**
	[0.0018]	[0.0025]	[0.0021]	[0.0039]
N	503	709	2578	2337
AR2	0.3194	0.1815	0.0701	0.1115
Hansen	0.9944	0.4604	0.1399	0.0664

5. Conclusion

Using the sample of 669 Vietnamese quoted firms from 2010 to 2021, we contribute to existing literature and evidence that foreign ownership discourages firm investment. The outcome suggests that in emerging markets like Vietnam, foreign investors focus on seeking short-term returns so that, long-term investment is cut back to save resources for earnings pushing, leading to the under-investment problem. In the context of high indebtedness, besides ensuring short-term profitability, firms have to prioritize debt repayment obligations, thus foreign owners become more hesitant to make investment decisions. Our finding holds strong across a variety of robustness checks.

The findings suggest that while foreign ownership can bring capital and expertise to Vietnamese firms, they tend to have short-term focus, and market uncertainties create unfavorable conditions that can limit corporate investment. Addressing these challenges may require enhanced transparency, improved governance practices, and supportive policies that encourage long-term investment. First, the Vietnamese government should propose suitable regulatory policies in order to promote the long-term involvement of foreign investors in domestic firms instead of short-term trading. Besides, managers of firms, which have large foreign shareholding, should carefully consider the appropriate amount of investment, and avoid cutting off profitable projects.

Although our study covers a large number of firms listed on Ho Chi Minh and Ha Noi stock exchanges from 2010 to 2021, the results may not represent all Vietnamese firms. Besides, it will be interesting to look deeper into other types of ownership, like institutional or managerial shareholdings. We leave these expansions for the future.

REFERENCES

[1] F. Modigliani and M. H. Miller, "The cost of capital, corporation finance and the theory of investment", *American economic review*, vol. 48, no.3, pp. 261-297, 1958.

[2] Q. T. Phan, "Country-level governance quality, foreign ownership, and firm investment: evidence from WBES database", *Cogent Economics & Finance*, vol. 12, no.1, e2302633, 2024.

[3] R. Chen, S. El Ghoul, O. Guedhami, and H. Wang, "Do state and foreign ownership affect investment efficiency? Evidence from privatizations", *Journal of Corporate Finance*, vol. 42, pp. 408-421, 2017.

[4] M. Guadalupe, O. Kuzmina, and C. Thomas, "Innovation and foreign ownership", *American Economic Review*, vol. 102, no. 7, pp. 3594-3627, 2012.

[5] D. Greenaway, A. Guariglia, and Z. Yu, "The more the better? Foreign ownership and corporate performance in China", *European Journal of Finance*, vol. 20, no. 7-9, pp. 681-702, 2014.

[6] S. Girma, Y. Gong, and H. Görg. "Foreign direct investment, access to finance, and innovation activity in Chinese enterprises", *World Bank Economic Review*, vol. 22, no. 2, pp. 367-382, 2008.

[7] J. C. Stein, "Agency, information and corporate investment", *Handbook of the Economics of Finance*, vol. 1, pp. 111-165, 2003.

[8] C. J. Hadlock, "Ownership, liquidity, and investment", *Rand Journal of Economics*, vol. 29, no. 3, pp. 487-508, 1998.

[9] M.C. Jensen and W.H. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Economics*, vol. 3, pp. 305-360, 1976.

[10] S. C. Myers and N. S. Majluf, "Corporate financing and investment decisions when firms have information that investors do not have", *Journal of Financial Economics*, vol. 13, no. 2, pp. 187-221, 1984.

[11] Q. T. Tran, "Foreign ownership and investment efficiency: new evidence from an emerging market", *International Journal of Emerging Markets*, vol. 15, no. 6, pp. 1185-1199, 2020.

[12] E. Gedajlovic, T. Yoshikawa, and M. Hashimoto, "Ownership structure, investment behaviour and firm performance in Japanese manufacturing industries", *Organization Studies*, vol. 26, no. 1, pp. 7-35, 2005.

[13] P. David, T. Yoshikawa, M. D. Chari, and A. A. Rasheed, "Strategic investments in Japanese corporations: Do foreign portfolio owners foster underinvestment or appropriate investment?", *Strategic Management Journal*, vol. 27, no. 6, pp. 591-600, 2006.

[14] J. C. Stein, "Efficient capital markets, inefficient firms: A model of myopic corporate behaviour", *Quarterly Journal of Economics*, vol. 104, no. 4, pp. 655-669, 1989.

[15] A. Agarwal and N. Chaudhry, "Foreign controlling shareholders and corporate investment". *Journal of International Financial Markets, Institutions and Money*, vol. *80*, e101613, 2022.

[16] L. H. N. Ha and A. Thai, "Unexpected investment, tunnelling and financial constraints", *International Journal of Emerging Markets*, vol. *18*, no. 9, pp. 2152-2175, 2023.

[17] T. H. A.Thai, T. T. A. Vo, and M. Mazur, "COVID-19 and investment–cash flow sensitivity: A cross-country analysis", *Research in International Business and Finance*, vol. 66, e102014, 2023.

[18] S. M. Fazzari, R. G. Hubbard, and B. C. Petersen, "Financing Constraints and Corporate Investment", *Brookings Papers on Economic Activity*, vol. 1, pp. 141-195, 1988.

[19] M. Z. Frank and V. K. Goyal, "Testing the pecking order theory of capital structure", *Journal of Financial Economics*, vol. 67, no. 2, pp. 217-248, 2003.

[20] K. H. Chung and K. H. Kim, "Growth opportunities and investment decisions: A new perspective on the cost of capital", *Journal of Business Finance & Accounting*, vol. 24, no. 3, pp. 413-424, 1997.