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A data-driven approach to understanding capital structure behavior of emerging listed manufacturing firms in Vietnam

Un enfoque basado en datos para comprender el comportamiento de la estructura de capital de las empresas manufactureras emergentes que cotizan en bolsa en Vietnam

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Abstract

This study delves into the complex relationship between capital structure decisions and the propositions of the trade-off theory and pecking order theory using panel data analysis. The trade-off theory suggests an ideal balance in the capital structure that considers the benefits of tax advantages and the costs associated with financial distress. On the other hand, the pecking order theory highlights the preference for internal financing due to information asymmetry. Employing a dataset of listed firms on the HNX and UPCOM stock exchanges from 2020 to 2022, the research examines how these theories shape the financing choices of manufacturing companies using the panel regression analysis in STATA statistical software. The findings indicate a positive impact of growth opportunities, gross profit, and firm age on capital structure while revealing a negative effect of profitability, asset attribute, liquidity, and corporate income tax on capital structure. This study seeks to clarify the observed trends and changes in the choices made by companies regarding their capital structure, shedding light on the interplay between theory and real-world financial practices among manufacturing firms.

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Keywords: capital structure; emerging economy; manufacturing firms; pecking order theory; trade-off theory

Resumen

Este estudio examina la relación entre las decisiones de estructura de capital y las teorías del equilibrio y del orden jerárquico, utilizando análisis de datos de panel de empresas manufactureras cotizadas en las bolsas HNX y UPCOM entre 2020 y 2022. Mientras la teoría del equilibrio propone un balance óptimo entre beneficios fiscales y costos de quiebra, la teoría del orden jerárquico destaca la preferencia por el financiamiento interno debido a la asimetría de la información. Mediante regresión de datos de panel en STATA, los resultados revelan que las oportunidades de crecimiento, el beneficio bruto y la antigüedad empresarial influyen positivamente en la estructura de capital, mientras que la rentabilidad, las características de los activos, la liquidez y el impuesto sobre la renta corporativo tienen un efecto negativo. El estudio contribuye a comprender cómo estas teorías se reflejan en las prácticas financieras reales del sector manufacturero.

Código JEL: C33, M21, M40, M48
Palabras clave: estructura de capital; economía emergente; empresas manufactureras; teoría del orden jerárquico; teoría del equilibrio

Introduction

Capital structure is pivotal in shaping a corporate strategic direction and financial health. It determines the combination of debt, equity, and other financial instruments a company utilizes to finance its operations and growth. The importance of making sound financing decisions lies in their profound impact on the cost of capital, risk profile, and firm value (Kieschnick & Moussawi, 2018). An optimal capital structure guarantees efficient resource allocation and impacts a corporate capacity to pursue new projects, expand operations, and weather economic fluctuations. Financing decisions affect shareholder returns, financial flexibility, and the ability to meet its obligations. As such, it is carefully considering capital structure is integral to achieving long-term sustainability and maximizing shareholder value in a competitive business landscape.

In Vietnam, a rapidly growing and influential economy in the Asia Pacific region, matters related to making efficient capital decisions have been largely disregarded (H. H. Nguyen, Ho, & Vo, 2019). HoSE, HNX, and UPCOM are three major stock exchanges in Vietnam. Businesses registering for new listing must register on the UPCOM and HNX stock exchanges before being transferred to the HoSE stock exchange. According to regulations in Circular 69/2023/TT-BTC, before July 1, 2025, HNX will receive listing registrations from businesses that meet the listing conditions according to Decree 155/2020/ND-CP and charter capital of 30 billion VND or more (Ministry of Finance, 2023). Thus, enterprises listed on HNX and UPCOM are mainly medium-sized enterprises, and in the early stages of

listing, there are many fluctuations in financial situation and business results. Researching the corporate capital structure at HNX and UPCOM stock exchanges provides evidence to help listed companies find solutions for sustainable development so they can move to listing on the HoSE stock exchange. There are some papers focus on large firms listed on HoSE stock exchange, such as D. T. T. Nguyen, Diaz-Rainey, and Gregoriou (2014), H. H. Nguyen et al. (2019); however, there is neligible evidence from newly listed companies in HNX and UPCOM stock exchange. Therefore, paying more attention to newly listed businesses is necessary to observe the optimal capital structure to help orient the company to sustainable development through capital structure decisions.

Conceptual framework

The capital structure is a debt ratio or leverage measure (Rajan & Zingales, 1995). There are diverse proxies of capital structure in preceding studies. For instance, Rajan and Zingales (1995) measured capital structure by debt to total assets, non-equity liabilities to total assets, debt to net assets, and debt to capital. Other researchers employed the terms of short-term leverage and long-term leverage (Šarlija & Harc, 2012), or current debt ratio, non-current debt ratio, and total debt ratio (Anh, Hung, & Binh, 2023)

The pecking order theory and trade-off theory are two popular theories to explain financing decisions. The trade-off theory implies that leverage demonstrates target adjustment, gradually eliminating deviations from the target, while the primary proposition of the pecking order theory is the rigid hierarchy of financing (Myers, 1984). Myers (1984) presents these two theories as overarching conceptual frameworks that have the potential to explain a wide range of facts. However, it is also plausible to consider both theories as components of a more comprehensive range of factors that influence a corrporate capital structure. Many researchers appear inclined to perceive both theories in a more restricted manner to understand the corporate financing decisions in different contexts, such as developed or developing countries (Agyei, Sun, & Abrokwah, 2020; Serrasqueiro & Caetano, 2015), public companies or SMEs (Martinez, Scherger, & Guercio, 2019).

The trade-off theory originated from the discussion surrounding the Modigliani-Miller theorem. The corporate income tax concept was incorporated into the original proposition of irrelevance by Modigliani and Miller (1963); it resulted in a favorable outcome for debt by providing a means to protect earnings from taxation. Companies optimize their value by balancing tax shields and financial distress costs to determine the debt and equity ratio in the capital structure. The present value of the tax shield must be enough to offset the costs of financial distress and increased agency costs. Managers consider the use of debt to balance the benefits and costs of debt. The advantages of debt are tax shields and interest, while debt costs are bankruptcy costs and agency costs between owners and creditors. Firms are concerned

with the effect of income taxes on firm valuation and financial structure to optimize capital structure (Brennan & Schwartz, 1978). The trade-off theory of capital structure elucidates the connection between tax rates, such as corporate income taxes, and the costs associated with financial distress with using debt in capital structure. In addition, the theory also elucidates the disparities in capital structures among various business sectors. A business can resort to high debt if it has high fixed assets and profitability. This theory has limitations, particularly regarding the challenging task of quantifying interest costs.

Many scholars employ trade-off theory to investigate and explain the determinants of capital structure through financing decisions such as firm size, asset structure, liquidity, and income taxes (Anh et al., 2023; Fleckenstein, Longstaff, & Strebulaev, 2020; Hạnh, 2019; Kurshev & Strebulaev, 2015; Tica, 2023). There are some differences in findings among capital structure proxies like leverage, long-term, short-term, and total debt ratios. For example, regarding developed market like Japan, Cortez and Susanto (2012) show statistical effects of non-debt tax shield and tangibility on leverage. A conclusion that Japanese manufacturing firms with more tangible assets tend to use more debt financing, while companies with tax advantages from non-debt expenses tend to rely less on debt. While growth in total assets and fixed asset, and firm size have no association with leverage (Cortez & Susanto, 2012). With a large market like China, a dataset of 716 firms for fifteen years indicate that a positive effect of firm size (Kyissima, Xue, Yapatake Kossele, & Abeid, 2020) and a negative effect of tangibility of assets on leverage (Kyissima et al., 2020). In Malaysia, Goh, Tai, Rasli, Tan, and Zakuan (2018) investigate 174 Malaysian manufacturing companies between 2011 and 2014 finding that non-debt tax shield is a negative determinant of total debt ratio, whereas firm size, liquidity, and asset structure have no connection to debt level. In Vietnam, Hạnh (2019) indicates that fixed assets and firm size have a positive connection to total debts, and liquidity has a negative effect on total debts. Quỳnh, Vinh, and Luân (2020) show that firm size, asset structure, and liquidity positively affect long-term and negative financial leverage, while taxes are not associated with financial leverage. Based on these arguments and previous evidence, this study proposes the following hypotheses:

Hypothesis H1: There is a positive effect of firm size on capital structure

Hypothesis H2: There is a positive effect of asset structure on capital structure.

Hypothesis H3: There is a positive effect of gross profit on capital structure.

Hypothesis H4: There is a negative effect of corporate income tax on capital structure.

Hypothesis H5: There is a negative effect of liquidity on capital structure.

Initially introduced by Donaldson (1961) and refined by Myers and Majluf (1984), the pecking order theory presents a framework elucidating how companies prioritize their financing sources. This theory posits that firms opt for internal financing over external funds, followed by debt over equity, when external financing is necessitated. The rationale behind this theory is the asymmetric information prevalent

in financial markets, where insiders possess superior knowledge compared to external investors. Consequently, issuing equity may signal to the market that the stock is undervalued, leading to adverse selection problems. Hence, firms are inclined to utilize retained earnings and debt to finance their investments, primarily due to the information asymmetry that hinders the efficient signaling of the corporate actual value (Myers & Majluf, 1984). The pecking order theory delineates how firms prioritize financing sources based on profitability, firm age, and growth opportunities. Empirical studies, such as those by Allen (1993), Rajan and Zingales (1995), Faulkender and Petersen (2006), Cortez and Susanto (2012), Goh et al. (2018), Kyissima et al. (2020), and Anh et al. (2023), highlight a correlation between profitability and a preference for internal financing. The negative effect of profitability on capital structure are confirmed in the both large or developed country, such as Japan and China, and small or developing market like Malaysia, GCC countries, and Srilanka. Due to their robust cash flows, profitable companies tend to rely more on retained earnings to fund investments than seek external financing. Furthermore, the theory suggests that younger firms might favor external equity due to limited internal funds, while older companies resort less to debt (Serrasqueiro, Nunes, & da Silva, 2016). Established firms with better growth prospects might choose debt over equity to maintain financial flexibility and signal confidence in future cash flows (Dũng & Thanh, 2021; Serrasqueiro et al., 2016). The research proposes the following hypothesis:

Hypothesis H6: There is a negative effect of profitability on capital structure.

Hypothesis H7: There is a positive effect of the growth of a firm on capital structure.

Hypothesis H8: There is a negative effect of the age of a firm on capital structure.

Methodology

The research proposed a research model based on the eight hypotheses above (1).

$$TDTDit = \alpha i + \beta 1SIZEit + \beta 2FIXEDit + \beta 3GROSSit + \beta 4CITit + \beta 5LIQit + \beta 6ROAit + \beta 7GROWit + \beta 8AGEit + uit \quad (1)$$

The measurement instrument of variables in the model (1) is shown in Table 1.

Table 1
The description of variables

Variables	Instrument	Hypothesis

Capital structure	TDTA	Total liabilities/Total assets	
Firm size	SIZE	Ln(Total assets)	H_1 (+)
Assets structure	FIXED	Fixed asset/Total assets	H_2 (+)
Gross Profit	GROSS	Cost of goods sold/Net Revenue	H_3 (+)
Company income tax	CIT	CIT/Net income	H_4 (-)
Liquidity	LIQ	Current asset/Current liabilities	H_5 (-)
Profitability	ROA	Net income/Total assets	H_6 (-)
Growth	GROW	$(Revenue_t – Revenue_{t-1}) /Revenue_{t-1})*100$	H_7 (+)
Firm age	AGE	Ln(2023 – established year)	H_8 (-)

The measurement of variables was adopted from previous studies by Anh, Hung, and Binh (2023), Tica (2023), Dũng and Thanh (2021), Nguyen, Than, Dinh, and Bui (2021), and Quỳnh, Vinh, and Luân (2020). The research used the total debt-to-total-asset ratio to measure the capital structure. The research sample is 107 listed manufacturing firms in 2020-2022, with 321 observations at UPCOM and HNX stock exchanges.

The research used Stata software 17 to analyze panel data. The study regressed the model (1) by Pooled ordinary least square (OLS), fixed effect model (FEM), and random effect model (REM). The study used the F test to choose the best estimation between Pooled OLS and FEM and the Hausman test to select FEM or REM (Dũng & Thanh, 2021). The next step is to check defects of the model (1) and use FGLS to fix if model defects exist.

Results and discussion

The descriptive statistics of variables are depicted in Table 2. Regarding the capital structure, the mean of the debt-to-total assets (TDTA) shows that listed manufacturing enterprises use an average of 45.4% debt in their capital structure. The maximum debt-to-total assets ratio is up to 129.5%, showing that manufacturing companies depend highly on debt. The unstable economic recovery and fluctuating interest rates can cause vulnerability to risks.

Table 2
Descriptive statistics of variables

Variable	Obs	Mean	Std. Dev	Minimum	Maximum
TDTA	321	0.454	0.233	0.024	1.295
ROA	321	0.055	0.085	-0.469	0.455
SIZE	321	8.591	0.511	7.317	10.218
FIXED	321	0.224	0.158	0	0.83
GROW	321	0.101	0.458	-0.999	4.659
LIQ	321	2.492	2.689	0.272	21.294
CIT	321	0.249	0.746	-0.005	11.557
GROSS	321	0.834	0.119	0.249	1.069
AGE	321	1.438	0.252	0.954	1.934

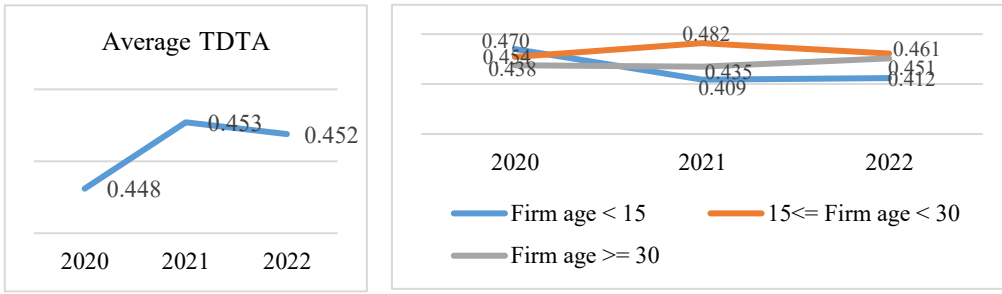

Figure 1. Illustration of capital structure by total debt-to-total-asset ratio.

The results in Figure. 1 reveal that the capital structure with an increasing total debt-to-total-asset ratio of 0.453 occurs in 2021 and slightly decreases to 0.452 in 2022. Following the COVID-19 pandemic, manufacturing enterprises faced a shortage of capital to resume production and business activities after a long period of suspension caused by the pandemic. The Vietnamese government's decision to loosen credit policies leads to a rise in the debt-to-total asset ratio of manufacturing enterprises. Thanks to the policies assisting businesses in recovering, there are some changes in the capital structure of firms; firms aged 15 to 30 experienced the most remarkable rise in total debt-to-total asset ratio in 2021 and 2022, whereas firms under 15 years old experienced the most significant decrease in their debt ratio.

The study examines the correlation between dependent and independent variables, including total debt, return on assets, firm size, fixed assets, growth ratio, liquidity, corporate income tax, gross profit, and firm age.

Table 3
Correlation analysis

Variables	TDTA	ROA	SIZE	FIXED	GROW	LIQ	CIT	GROSS	AGE
TDTA	1								
ROA	-0.402	1							
SIZE	0.413	-0.086	1						
FIXED	-0.041	0.028	0.13	1					
GROW	0.143	0.118	0.222	-0.112	1				
LIQ	-0.773	0.246	-0.334	-0.177	-0.064	1			
CIT	-0.047	0.072	0.197	-0.104	0.21	0.049	1		
GROSS	0.265	-0.481	0.049	-0.105	0.057	-0.148	-0.055	1	
AGE	-0.038	0.235	0.084	0.06	-0.068	0.037	0.158	-0.25	1

Table 3 shows the correlation coefficient between variables in the model. Regarding the correlation between the independent variables, none of them exceeds 0.8, and the highest correlation

coefficient among independent variables is 0.481. The remaining pairs of correlation values in the model, except GROSS and ROA, all have a relatively low correlation, lower than 0.3. These results reveal that the correlation among variables is low. The study also tests the multicollinearity among independent variables, shown in Table 5.

For panel data, the study carried out three estimated methods, including OLS, FEM, and REM, and then chose the best estimation model. The results of model regression using estimation methods are summarized in Table 4. The study carries out F-test and Hausman test to select the best estimation that compares and chooses the appropriate model among OLS, FEM, and REM. The research uses the F test to consider and choose between OLS and FEM estimations to fit the regression method. The result of the F test is in Table 4 with sig. = 0.000, with a statistical significance level of 1%, FEM estimation is selected. Hausman test is implemented to choose FEM and REM. The result of the Hausman test is in Table 4 with sig. = 0.000 indicates that the FEM model is appropriate for estimating data.

Table 4
Choosing the model by F-test and Hausman test

TDTA	OLS	FEM	REM
ROA	-0.675***	-0.440***	-0.506***
	-0.115	-0.104	-0.0961
SIZE	0.0792***	0.169***	0.111***
	-0.0148	-0.0315	-0.0191
FIXED	-0.260***	0.00155	-0.118**
	-0.0466	-0.0628	-0.0498
GROW	0.0659**	0.0138	0.0136
	-0.0261	-0.0138	-0.0138
LIQ	-0.0885***	-0.0567***	-0.0709***
	-0.00437	-0.00511	-0.00436
CIT	-0.170**	-0.0712	-0.117**
	-0.0704	-0.0497	-0.0487
GROSS	0.0965	0.0149	0.0316
	-0.0839	-0.104	-0.0838
AGE	0.0515*	-0.396**	-0.00575
	-0.0273	-0.194	-0.0427
Constant	-0.0708	-0.289	-0.294
	-0.152	-0.379	-0.199
Observations	321	321	321
R-squared	0.716	0.564	0.538
Number of MCK		107	107

*** p<.01, ** p<.05, * p<.1

Test method	Choose model	Sig.	Results
F-test	OLS or FEM method	0.000	FEM model selection
Hausman test	FEM or REM method	0.000	FEM model selection

Choose OLS or FEM: Sig. < 0.05: Select FEM model.
Choose FEM or REM: Sig. < 0.05: Select FEM model

After selecting the method, the study tests the defects of the research model, including multicollinearity, heteroscedasticity, and serial correlation. The summary of the defects test is depicted in Table 5.

Table 5
The summary of defects

Test defects of models	Test results	Conclusion
Multicollinearity	VIF < 2; 1/VIF > 0.5	No multicollinearity
Heteroscedasticity	Prob>chi2 = 0.0000 < 5%	Heteroscedasticity
Autocorrelation	Prob > F = 0.1269 > 5%	No autocorrelation.

The results in Table 5 reveal no multicollinearity and autocorrelation in the model. No multicollinearity between the independent variables is demonstrated because the VIF coefficients are lower than 1, and 1/VIF values are greater than 0.5. The P-value of the F-test is 0.1269 > 0.05, indicating no autocorrelation. However, the FEM model exists heteroscedasticity. Thus, the study uses the feasible generalized least squares (FGLS) method to fix heteroscedasticity and ensure an efficient estimation.

Table 6
The summary of the model regression

TDTA	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ROA	-0.677	0.038	-18.03	0.000	-0.751	-0.604	***
SIZE	0.082	0.007	11.26	0.000	0.068	0.096	***
FIXED	-0.297	0.022	-13.67	0.000	-0.339	-0.254	***
GROW	0.036	0.012	3.04	0.002	0.013	0.06	***
LIQ	-0.088	0.002	-45.14	0.000	-0.092	-0.084	***
CIT	-0.192	0.037	-5.25	0.000	-0.264	-0.121	***
GROSS	0.07	0.041	1.72	0.086	-0.01	0.151	*
AGE	0.044	0.013	3.25	0.001	0.017	0.07	***
Constant	-0.051	0.077	-0.67	0.505	-0.203	0.1	
Mean dependent var		0.446			SD dependent var	0.207	
Number of obs		321			Chi-square	2944.51	

*** $p<.01$, ** $p<.05$, * $p<.1$

Hypotheses H1, H2, H3, and H7 postulated a positive effect of firm size, growth opportunities, asset attributes, and gross profit on corporate capital structure. Hypothesis H1 assumes that firm size is positively related to capital structure. The regression result of hypothesis H1 shows that firm size has the most decisive positive impact on the capital structure of listed manufacturing firms. This finding is consistent with the trade-off theory that large-scale companies easily access sources of loans and can enjoy preferential interest rates, so they tend to use debt more. The larger the company, the stronger the financial strength and the lower the bankruptcy risk. Large-scale enterprises have more information in the market,

efficient business operations, high debt repayment ability, and a better reputation with suppliers and creditors than small enterprises. This result is also consistent with the empirical studies of Ab Wahab and Ramli (2014), Đặng and Quách (2014), and Quỳnh et al. (2020), and Kyissima et al. (2020). Hypothesis H2 suggests a positive effect of asset structure on capital structure. This shows that the trade-off theory is suitable when considering the direct impact of asset structure on capital structure. Typically, firms with more fixed assets will find it easier to mobilize debts because creditors will lower their risk assessment with collateral and offer low borrowing costs. From 2020 to 2022, enterprises with high rates of fixed assets resort to more debts that are consistent with Sheikh and Wang (2011), Imtiaz, Mahmud, and Mallik (2016), Kyissima et al. (2020), and Dũng and Thanh (2021). The acceptance of hypothesis H3 reinforces the positive influence of specific characteristics of the assets on capital structure. In the post-COVID-19 recovery period, the listed manufacturing firms with high gross profit will have a capital structure with a high total debt ratio. Due to the increase in raw material prices and labor costs, the cost of goods sold rises. When the cost of goods sold increases, the gross profit will decrease, leading to difficulty raising capital, so they have to take out external debt. This leads to a positive correlation between gross profit and capital structure. The acceptance of hypothesis H7 suggests that growth positively affects the capital structure of listed companies. Regression results also show a positive correlation between the independent and dependent variables, with a very high statistical significance of 1%. When the revenue growth rate increases to 1%, the capital structure increases to 3.65%. This correlation is consistent with the pecking order theory as well as studies by Ellili and Farouk (2011), Khaki and Akin (2020), and Dũng and Thanh (2021). When businesses with high growth rates have significant borrowing needs, if retained earnings are insufficient to meet operations, they prioritize choosing loans to increase the debt ratio. This is also consistent with the fact that manufacturing enterprises mostly use debts to finance their operating activities and investment projects instead of seeking capital in the market.

Hypotheses H4, H5, H6, and H8 are accepted, suggesting a negative effect of profitability, liquidity, corporate income tax, and firm age on capital structure. The findings reinforce these adverse impacts following the pecking order and trade-off theory. Regarding profitability, an increase in ROA leads to a reduction of the debt-to-total assets ratio. This result supports the pecking order theory and is also consistent with Janbaz (2010), Sheikh and Wang (2011), and Akpinar (2016). According to the pecking order theory, firms first use retained earnings to re-invest and then issue shares. When firms have high profitability, they prefer to use internal capital from retained earnings over borrowing for investment. Low-profitability companies need to increase loans to ensure operations that trigger a financial burden. In the first phase of listing on the stock exchange, like listed in HNX and UPCOM in Vietnam, public companies

Regarding hypothesis H5, the result is consistent with previous studies of Sheikh and Wang (2011), Šarlija and Harc (2012), Lê (2016), Hồ and Nguyễn (2020), and Khaki and Akin (2020), but inconsistent the result in Malaysian manufacturing analysis of Goh et al. (2018). An increase in liquidity is due to either an increase in current assets or a decrease in current liabilities. The higher the liquidity, the lower the short-term debt, decreasing the debt-to-total assets ratio. Enterprises with high liquidity will prioritize using their equity to borrow. Since the acceptance of hypothesis H6, the corporate income tax increases, the debt-to-total assets ratio will decrease. The effect of corporate income tax is contrary to M&M theory, which reveals that when corporate income tax is high, firms take on more debt to take advantage of the tax barriers. The findings demonstrate that listed manufacturing companies prefer to use internal capital over borrowed capital if the amount of corporate income tax is high. This finding is similar to some studies such as Đặng and Quách (2014), Zhang, Gao, and Yang (2016), Lê (2016), and Goh et al. (2018). The acceptance of hypothesis H8 reveals that younger manufacturing firms in Vietnam resort to more debt, while older firms tend to use less debt because of their retained earnings (Serrasqueiro et al., 2016). Businesses operating for a long time will take on more debt because they have a good reputation and easy access to debt. This result also supports several studies by Ellili and Farouk (2011) and Chen and Strange (2005).

Conclusions

Trade-off and pecking order theories offer distinct perspectives on how firms determine their capital structure, considering different factors and priorities. While the trade-off theory suggests an optimal balance between tax advantages and financial distress costs, the pecking order theory emphasizes internal financing over external sources due to information asymmetry. This study uses a dataset of manufacturing firms listed in HNX and UPCOM from 2020 to 2022 to discover the effect of determinants. Empirical evidence of manufacturing listed companies in Vietnam has supported aspects of both theories, demonstrating that firms often consider a blend of factors including firm size, firm age, profitability, fixed asset, gross profit, liquidity, growth opportunities, corporate income tax, and access to capital markets when determining their capital structure. Additionally, studies have highlighted that firm size, firm age, gross profit, and growth opportunities have positive effects, whereas asset structure, liquidity, profitability, and corporate income tax have a negative influence on the debt level of manufacturing firms in newly listed stock exchanges. To achieve stable and sustainable development after the COVID-19 epidemic, listed production companies in Vietnam should carefully evaluate their characteristics in light of various influencing factors when considering capital support solutions offered by the Vietnamese

government and credit institutions. This evaluation will enable them to determine their most optimal capital structure.

This study has a few limitations that future research can evolve to clarify the whole landscape of financing decisions in emerging firms. This research is limited to using only one proxy, total debt-to-total-asset (TDTA), to measure capital structure. Several researchers used diverse measures like total debt ratio, short-term debt ratio, and long-term debt ratio to explain corporate capital structure (Anh et al., 2023; Rajan & Zingales, 1995). Thus, further studies can combine measures to understand the financing choices better.

Moreover, this research focuses on and contributes to the emerging market economy discussion with data from manufacturing enterprises in Vietnam, especially newly listed companies, using the trade-off and peeking order theories to examine the influence of micro factors. However, many previous studies have included micro and macro factors to highlight the cross-country perspectives in financing decisions (Hossain, 2021; Mokhova & Zinecker, 2014). The macro factors between different countries will have different influences on the capital decision of the enterprise. Future studies can collect data on countries across the region to compare the influence of macro factors on capital structure decisions.

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