Science & Technology Development Journal – Kinh tế-Luật và Quản lý 2023, 7(3):4556-4561

Research article

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What do we know about the capital structure choice of large firms – the case of Vietnam?

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ABSTRACT

In most countries, enterprises play a significant role in contributing to production, investment, job creation, and output. Enterprises are also the leading bird in applying science and technology, improving labor productivity, and implementing digital transformation in the context of the industrial revolution 4.0. Therefore, countries always want to create a favorable business environment, reduce transaction costs and market access costs, improve capital markets, and improve the quality of human resources to develop businesses and then make more contributions to socio-economic development. In particular, the financial market needs adjustments to improve the ability to provide and transfer capital to businesses at optimal costs, helping businesses achieve business efficiency. Using a sample size of 30 enterprises in Vietnam's stock market in the period 2011 to 2021, at the same time, using the panel-corrected standard error (PCSE) method to handle the defects in the estimated model and the phenomenon of cross-dependence between enterprises on the stock market, the research results confirmed that large-scale enterprises often have many advantages in accessing external loans to finance their investment projects. However, larger firm size is consistent with slower access to loans. On the contrary, small-scale enterprises often have high risks and are difficult to access bank loans, so small-scale enterprises should prioritize using their own capital to finance their investment projects. In addition, the study also affirmed that corporate profitability, board of directors' size, board of directors' meeting frequency, and foreign participation in the board of directors often orient enterprises to increase funding by equity as well as limited loan capital. The study also found no effect of sales growth on capital structure choice.

Key words: enterprise, capital, stock, board of directors

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History

- Received: 04-5-2023
- Accepted: 30-6-2023
- Published Online: 30-9-2023

DOI :

https://doi.org/10.32508/stdjelm.v7i3.1227

Check for updates

INTRODUCTION

Enterprises play a considerable role in contributing to socio-economic development in most countries. Within its scope, businesses can create jobs, contribute to the national budget, and output to the economy. Large enterprises increasingly contribute to the economy even though they only account for a relatively small proportion of the number of enterprises in the country. In addition, large enterprises can invest in large production projects with high productivity performance and position themselves as the leaders in economic activities. Meanwhile, small and medium enterprises account for a high proportion of the number of enterprises but often have small production and high production costs, so it is difficult for them to be highly competitive in a business environment where there are many fluctuations as fast as today.

Capital is a vital input resource for the production and business of most enterprises. Enterprises often mobilize capital from bank credit, especially in Vietnam, where bank credit is still the place where all needs of enterprises can be met. Meanwhile, not many domestic enterprises can mobilize long-term capital from the stock market because most of them are unlisted or not yet eligible to list on the stock market. Businesses can then use the mobilized capital for investment, production, and business, especially those that need access to long-term capital to be able to invest in fixed assets to meet long-term business needs. Typically, large enterprises have great financial potential, so they often require large investments. Capital that this business sector requires is therefore often more considerable.

Large enterprises can be considered as enterprises with large capital scale, or a large number of employees, or enterprises with operating lines and larger markets than small and medium enterprises. In general, large enterprises often have certain advantages in the market, lower production costs, and, therefore, more stable business performance.

Previous studies have suggested a relationship between firm size and capital structure choice. Rao et al.[1] argued that larger enterprises have more advantages in the market and, therefore, more advantages in accessing external funding. However, the pecking

Cite this article : Nguyen V C. **What do we know about the capital structure choice of large firms –the case of Vietnam?**. *Sci. Tech. Dev. J. - Eco. Law Manag.* 2023; 7(3):4556-4561.

order theory suggests that enterprises should prioritize internal capital and use external funding because external capital may pose risks to the company's operations. At the same time, a firm may fall into financial distress, as discussed by da Rosa München[2] in the case of firms in Brazil. Moreover, da Rosa München[2] also confirmed that risks also affect the operation of the enterprise.

Whether large enterprises often have many advantages and should increase borrowing to meet the needs of investment, production, and business is a research issue that needs to be examined in this article. The objective of the study is to evaluate the factors affecting the choice of capital structure choice, especially the capital structure decisions for larger firms. The study is conducted on companies in the pharmaceutical industry listed on the Vietnamese stock market.

Apart from the introduction, the rest of the study is as follows: Section 2 indicates the literature review. Section 3 indicates data collection and methodology. Section 4 depicts the results and discussions for Section 5. Finally, Section 6 depicts the conclusions.

LITERATURE REVIEW

Capital is an important input resource to help businesses invest in fixed assets, purchase raw materials, and pay labor and financial costs. According to the Cobb-Douglas production function, capital is a major factor of production along with labor and the technological factor, which helps enterprises to produce, and the economy to create the national output. In light of economic development, meeting the demand for capital can be contribute to the cause of business development and economic growth.

Research by Du et al.[3] uses a sample of companies listed in China for the period 2010 to 2021 and argues that asymmetric reduction through interaction between investors and management is likely to reduce financial leverage at companies. Moreover, the positive relationship becomes more vital for companies with opaque information environments. Therefore the authors also emphasize the role of retail investors having a significant impact on the decision to use financial leverage. Further, Sikveland et al.[4] suggested that seasonal factors and geographical factors of the company have an influence on the choice of capital structure, using fixed-effects panel data at companies in the hospitality industry in Norway between 2008 and 2018 and suggesting that the seasonality created by foreign tourists increases the share of long-term debt in the capital structure. In addition, aggregating companies operating in a single geographic area is likely to increase a company's dependence on short-term debt while liquidity has a negative effect on concentration, concluding that competition drains cash with short-term debt acting as a substitute.

Another possibility, Rao et al.[1] studied 174 small and medium enterprises in India and used the GMM method to deal with endogeneity in the estimation model when the residuals of the estimated model have a statistically significant relationship with independent variables. The study confirmed the relationship of factors such as profitability, tangibles, size, firm age, growth and liquidity, and cash flow to the choice of capital structure of the company. The authors also asserted that it is appropriate to apply the pecking order theory to small and medium-sized companies in India because it is difficult for small and medium-sized companies to access loans in the context of information asymmetry in the financial markets are still high. In another study, Shu et al.[5] studied Chinese listed companies from 1997 to 2018 and confirmed that carbon policy risks reduce the financial leverage of companies. This negative relationship is more evident in non-state-owned enterprises, enterprises with low ownership ratio of institutional investors, enterprises with poor social responsibility performance and enterprises in the competitive or carbon-sensitive industry group, and businesses in provincial cities. The research shows that it provides recommendations to help companies address carbon policy risks and guidance for governments and regulators to implement further environmental policies.

The study by da Rosa München[2] analyzes the panel data in Brazil for the period 2009 to 2016 and suggests that there is an effect of financial distress on capital structure choice, although this effect depends on the different scenarios. In normal times, the study finds that corporate capital is higher than in challenging economic conditions. During an economic recession there is a financial distress effect on capital and a negative effect, suggesting that risk to capital is higher during times of uncertainty. Research by Thipayana[6] suggests that selecting financial resources is an important issue in enterprises, especially long-term financial sources which are good for doing investment opportunities in enterprises. Therefore, capital structure decisions are an important issue in financial management that contributes to maximizing firm value. Bankruptcy costs, tax shields, agency costs, and information asymmetries all influence capital structure choice decisions.

There have been very few studies done in Vietnam, and also have some important results, such as large-scale enterprises often choosing equity-based structure while medium-sized enterprises often prefer to choose a capital structure from external funding, which has been confirmed by Nguyen and Le[7] in listed real estate companies. However, studying a larger sample size, Bui[8] suggested that there is a positive effect between the size of the firm and the choice of capital structure; that is, large enterprises often prioritize the choice of debt in its capital structure.

DATA COLLECTION AND METHODOLOGY

Data collection

This study uses the data of 30 companies listed on the Ho Chi Minh City and Hanoi Stock Exchanges from 2011 to 2021. The data source used in this study is collected from the audited financial statements, and some data may be collected from the annual report published every year. The data is processed for errors, then used for analysis.

Methodology

Based on previous research by Rao et al.[1], the regression equation is written as follows:

EBTit = β_0 + β_{11} SIZEit + β_{12} SIZESQit + β_2 ROAit + β_3 GROWTHit + β_4 BOARDit + β_5 FREit + β_5 FOREit + μit

Where:

DEBTit, as the independent variable, represents the capital structure of firm i, at year t, and is measured by total debt to total assets;

SIZEit, being the independent variable, represents the size of in enterprise i, at year t;

SIZESQit, being the independent variable, represents the nonlinearity of measuring the effect of size in enterprise i, at year t;

ROAit, is a parameter representing the profit of enterprise i, at year t, measured through ROA;

GROWTHit, being the independent variable, represents the revenue growth of enterprise i, at year t;

BOARDit, as the independent variable, represents the size of the board of directors of enterprise i, at year t, measured by the total number of members in the board of directors compared to the maximum 11 members of the board of directors as required by law, therefore the larger the BOARD, the larger the board size;

FREit, being the independent variable, represents the monthly meeting frequency of the Board of Directors of enterprise i, at year t;

FOREit, being the independent variable, represents the foreign members of the Board of Directors of enterprise i, at year t;

In this study, we use panel regression. In the case of short tables, performing PCSE regression becomes more suitable due to its ability to handle the problem of autocorrelation and variable variance, as well as cross-sectional dependence between firms.

RESULTS

Descriptive statistics

Table 1 presents descriptive statistics and shows that 48.8% of enterprises are mobilizing capital from debt, and the rest 51.2% is from equity. In terms of firm size, this index has a large variation between the minimum and the maximum, indicating large differences in size. Regarding the financial performance of enterprises, ROA averaged 7.68% and is also quite different, but the business results of enterprises in this study are different. In terms of board of directors' size, the average number of members is nearly 6, but there are some companies with a minimum of 3 members and some companies with a maximum of 11. Regarding the number of meetings of the board of directors, it has an average value of 0.55 meetings/month, which is a relatively low level. The number of foreign members on the Board of Directors is only 8.3% of the total number of members and is a relatively low level.

Correlation analysis

Table 2 shows a low degree of correlation between the independent variables in this study. Therefore, the study shows that it is unlikely that multicollinearity in the estimation model is possible.

RESULTS DISCUSSIONS

Table 3 shows that the estimated coefficients of the variables SIZE and SIZESQ are statistically significant, so it can be seen that there is an impact on the use of leverage in the enterprise. The estimated coefficients of ROA, BOARD, FRE, and FORE are negative and statistically significant. It can be said that the return on total assets, the board size, and the frequency of board of directors' meetings, the foreign members of the board of directors influence the ability to choose a capital structure favoring equity in the enterprise. However, the estimated coefficient of GROWTH is not statistically significant, so the company's sales growth has not had an impact on the choice of capital structure.

The research results also show that large enterprises can easily choose external capital, which can be explained because large enterprises have more advantages in terms of brand, market, and ability to generate

Table 1: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
DEBT	323	0.4888133	0.2222415	0.092188	0.9706116
SIZE	323	5.874404	0.6559559	4.26529	7.757748
ROA	323	0.0768604	0.0709342	-0.364934	0.3367818
GROWTH	319	0.1259524	0.551446	-0.7368436	5.282018
BOARD	330	0.4914601	0.172283	0.27	1
FRE	330	0.5590909	0.5732055	0	3
FORE	310	0.0834089	0.139151	0	1

Source: the analysis

Table 2: Correlation analysis

Variable	SIZE	ROA	GROWTH	BOARD	FRE	FORE
SIZE	1.0000					
ROA	-0.0320	1.0000				
GROWTH	0.0277	0.1514	1.000			
BOARD	0.1711	0.3190	-0.0077	1.000		
FRE	0.1992	0.0744	0.0167	0.0713	1.0000	
FORE	0.2255	0.1336	-0.0189	0.0726	0.2842	1.0000

Source: the analysis

Table 3: Regression results

Variable	Regression results			
	(1)	(2)	(3)	(4)
SIZE	0.0699*** (0.000)	0.0947*** (0.000)	0.5475*** (0.002)	0.5475*** (0.005)
SIZESQ			-0.0377*** (0.007)	-0.0377** (0.019)
ROA		-1.4955*** (0.000)	-1.5882*** (0.000)	-1.5882*** (0.000)
GROWTH		0.0021 (0.910)	0.0048 (0.807)	0.0048 (0.777)
BOARD		-0.2055*** (0.005)	-0.2233*** (0.006)	-0.2233*** (0.007)
FRE		-0.0413** (0.011)	-0.0490*** (0.006)	-0.0490*** (0.005)
FORE		-0.3086*** (0.000)	-0.3428*** (0.000)	-0.3428*** (0.000)
_cons	0.0778 (0.325)	0.1997*** (0.001)	-1.1193** (0.038)	-1.1193** (0.049)
prob	0.0000	0.0000	0.0000	0.0000

*Note: **,*** corresponds to the significance level of 5%, 1%. The value in brackets is p-value*
Source: Author's calculations

profits. Large enterprises can lead in the market, so they have more transparent information and the ability to reduce information asymmetry, making it easier for large enterprises to access loans from banks and financial institutions. Moreover, large enterprises have more advantages in negotiating with creditors, so they can access loans with optimal interest rates that facilitate their business. This result is similar to the study of Bui [8], when the authors indicated that large enterprises often have more advantages in negotiating with creditors and easily access loans with optimal costs. In contrast, small businesses often have greater risks and therefore do not have the advantage of accessing external funding.

The research results also show that the SIZESQ coefficient has a negative sign, which means that large enterprises have more debt capacity. However, up to a certain threshold, the debt capacity of enterprises decreases, and then enterprises are forced to finance investments with the enterprise's own capital. Indeed, when firms finance too much with debt, they may fall into financial distress, especially in the context of macroeconomic uncertainties and the impact of external shocks that have a negative impact on the economy. In addition, large enterprises require higher management ability, so if enterprises borrow too much, the pressure of debt repayment, sales administration, cash, and financial activities will be greatly increased and become more complex.

CONCLUSIONS

Capital is an important input resource for production and doing business. To meet the demand for capital, enterprises can mobilize long-term capital on the stock market to finance their investment and business needs, or also capital from shareholders, retained earnings, and especially loans from the banking sector and credit institutions. Researching 30 pharmaceutical enterprises in Vietnam's stock market from 2011 to 2021, the research results confirm that large-scale enterprises often have many advantages in accessing external loans for financing their investment projects. However, if a business is increasing to a certain threshold, the ability to access loans will increase slowly and then may decrease. The study also confirms that the financial performance of the enterprise, the size of the board of directors, and the frequency of meetings of the board of directors and foreign board members are capable of making businesses choose capital in favor of equity rather than debt. The study also confirmed that there is no evidence of an impact between revenue growth and capital choice in firms.

ABBREVIATIONS

PCSE Panel- Corrected Standard Error
GMM Generalized Method of Moments
ROA Return on Assets
SIZE Firm Size
SIZESQ Firm Size Square
GROWTH Revenue Growth of Firm
BOARD Size of the Board of Directors
FRE Frequency of the Board of Directors
FORE Foreign Members of the Board of Directors

CONFLICTS OF INTEREST

We have no conflicts of interest to disclose.

CONTRIBUTIONS

The entire content of the article is made by the author only.

ACKNOWLEDGEMENTS

We would like to thank the reviewers for their useful comments on our paper.

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Tạp chí Phát triển Khoa học và Công nghệ – Economics-Law and Management 2023, 7(3):4556-4561

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Chúng ta biết gì về sự lựa chọn cấu trúc vốn của các doanh nghiệp lớn – trường hợp của Việt Nam?

Nguyễn Văn Chiến*

TÓM TẮT

Doanh nghiệp có vai trò lớn trong đóng góp vào hoạt động sản xuất, đầu tư, tạo công ăn việc làm và sản lượng tại hầu hết các quốc gia. Doanh nghiệp còn là cánh chim đầu đàn trong áp dụng khoa học công nghệ, nâng cao năng suất lao động và thực hiện chuyển đổi số trong bối cảnh cách mạng công nghệ 4.0. Vì vậy, các quốc gia luôn mong muốn tạo môi trường kinh doanh thuận lợi, giảm chi phí giao dịch và chi phí tiếp cận thị trường, cải thiện thị trường vốn và nâng cao chất lượng nguồn nhân lực để phát triển doanh nghiệp, từ đó có nhiều đóng góp hơn nữa cho phát triển kinh tế - xã hội. Trong đó, thị trường tài chính cần hoàn thiện nhằm nâng cao khả năng cung cấp và luân chuyển vốn đến doanh nghiệp với chi phí tối ưu, giúp doanh nghiệp đạt được hiệu quả kinh doanh. Sử dụng mẫu nghiên cứu cả 30 doanh nghiệp tại thị trường chứng khoán Việt Nam trong giai đoạn 2011 đến 2021, đồng thời sử dụng phương pháp phân tích sai số chuẩn hiệu chỉnh dữ liệu bảng (PCSE) nhằm xử lý các khuyết tật trong mô hình ước lượng và hiện tượng phụ thuộc chéo giữa các doanh nghiệp trên thị trường chứng khoán, kết quả nghiên cứu khẳng định doanh nghiệp có quy mô lớn thường có nhiều ưu thế trong tiếp cận nguồn vốn vay từ bên ngoài để tài trợ cho các dự án đầu tư. Tuy vậy, khi quy mô doanh nghiệp càng lớn thì khả năng tiếp cận vốn vay càng chậm lại. Ngược lại doanh nghiệp có quy mô nhỏ thường có rủi ro cao và khó có khả năng tiếp cận nguồn vốn vay ngân hàng, nên doanh nghiệp quy mô nhỏ nên ưu tiên sử dụng nguồn vốn tự có để tài trợ cho các dự án đầu tư của mình. Hơn nữa, nghiên cứu cũng khẳng định lợi nhuận của doanh nghiệp, quy mô hội đồng quản trị, tần suất họp của hội đồng quản trị và sự tham gia của người nước ngoài trong hội đồng quản trị thường định hướng doanh nghiệp gia tăng nguồn tài trợ bằng vốn chủ sở hữu và hạn chế nguồn vốn vay. Nghiên cứu còn cho rằng không có ảnh hưởng của tăng trưởng doanh thu đến lựa chọn vốn trong doanh nghiệp.

Từ khoá: doanh nghiệp, vốn, chứng khoán, hội đồng quản trị

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Lịch sử

- Ngày nhận: 04-5-2023
- Ngày chấp nhận: 30-6-2023
- Ngày đăng: 30-9-2023

DOI : https://doi.org/10.32508/stdjelm.v7i3.1227

Trích dẫn bài báo này: Chiến NV. **Chúng ta biết gì về sự lựa chọn cấu trúc vốn của các doanh nghiệp lớn – trường hợp của Việt Nam?**. *Sci. Tech. Dev. J. - Eco. Law Manag.;* 2023, 7(3):4556-4561.