The Impact of the Capital Structure on Firm Performance: The Case of New Enterprises

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ABSTRACT

This study investigates the impact of initial capital structure decisions on the performance of start-ups, as well as the benefits of formal debt - particularly bank loans - in the context of a developing economy. We employ regression analysis using the Generalized Method of Moments (GMM) based on panel data from 277 firms during their first five years of operation, including those that had ceased operations at the time of analysis. The results indicate a positive relationship between corporate debt levels and the performance of new firms. This finding contrasts with many studies on mature firms, which often suggest that a higher debt ratio negatively affects firm performance. Furthermore, the analysis highlights the importance of formal debt in early capital structure decisions, showing that businesses with higher leverage - especially those utilizing official bank loans - tend to achieve superior performance in their initial stages.

I.   INTRODUCTION

The impact of capital structure on firm performance has long been investigated, with previous research primarily focusing on mature, publicly traded, and large firms. These studies frequently report a negative association between capital structure and firm performance (Friend and Lang, 1988; Titman and Wessels, 1988; Ebaid, 2009; Wang et al., 2014; Vithessonthi and Tongurai, 2015). This observation is also supported by Dao and Ta (2020), who found that nearly half of prior empirical studies report a significant negative relationship between capital structure and firm performance, especially among mature firms. Since such findings are derived from firms with established access to financing, their results may not be fully generalizable to newly established firms due to differences in their life cycle characteristics.

The difference in capital structure decisions between start-ups and mature firms was first noted by Berger (1998, who examined age-related disparities in access to funding across the business cycle. Subsequent studies have reinforced this view, suggesting that a newly established firm's capital structure is generally determined not only by capital needs but also by its ability to raise external capital (Dang, 2013) or depends on the credit supplier, considering information asymmetry caused by young firms' lack of historical data and reputation (Huyghebaert, 2001) In addition, Colombo and Grilli (2005); Cassar (2010); Korosteleva and Mickiewicz (2011) emphasize that young firms face significant challenges in mobilizing financial resources due to weak business environment and underdeveloped funding mechanism, which restrict access to financial markets.

These external barriers often result in financial constraints that hinder business operations. Start-ups typically require more time to become eligible for initial public offerings (IPOs) to raise capital through the issuance of securities (Nofsinger and Wang, 2011) and to build credibility and reputation to be able to access capital resources from the Bank, as lenders are unable to value a company's current asset quality and future growth opportunities based on its early-stage conditions (Stiglitz and Weiss, 1981). Accordingly, the capital structure decisions of start-ups depend more on the credit supply side than those of mature firms, *ceteris paribus*.

Setting up a capital structure based on credit availability appears more challenging for start-ups in developing countries (Berger & Udell, 1998; Cassar, 2010). In particular, in economies where capital markets are underdeveloped, firms primarily rely on bank loans and government funding to mobilize external capital. The lack of venture capital and the difficulty in accessing formal financing are among the most common barriers faced by start-ups (Pickernell et al. 2013). Consequently, when financial restraints are severe, newcomers tend to perform better when they have access to more external resources. However, there are almost no studies that empirically examined the relationship between capital structure and business performance of newly established firms to date except for the study of Franck et al., (2010), using data from 18,935 start-ups established between 1996 and 2003 in Belgium during a 5-year window after start-up. Franck et al., (2010) found that more highly indebted business start-ups are more profitable, in the context of a developed country. This finding motivates the present study to explore whether such a relationship holds across economies with different levels of economic development.

In Vietnam, asymmetric information appears more severe, owing to an immature financial market, limited availability of venture capital, and restricted funding channels for start-ups. Besides, interest rates are relatively high and volatile, with annual lending rates ranging from 10% to 15% during the 2010–2020 period. Hence, understanding how capital structure affects firm performance in this context becomes particularly relevant.

Our study extends the existing literature on capital structure and performance in mature firms (Friend and Lang, 1988; Titman and Wessels, 1988; Ebaid, 2009; Wang et al., 2014; Vithessonthi and Tongurai, 2015) by analyzing this relationship in the early stages of firm development. We build upon the work of Franck et al. (2010), employing the Generalized Method of Moments (GMM) to address endogeneity more rigorously than traditional lag-based approaches. In addition, we also control for whether firms used bank loans to examine the role of formal debt in shaping performance during the first five years of operation. This approach is informed by theoretical suggestions from Berger and Udell (1998); Huyghebaert and Gucht (2007) and Robb & Robinson (2014), though empirical evidence remains limited.

II.   THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

A.   Theoretical Background

Two of the most widely cited theories explaining capital structure decisions are the trade-off theory and the pecking order theory. According to the trade-off theory (Jensen & Meckling, 1976), the use of debt allows firms to benefit from tax shields, thereby enhancing business efficiency. Increasing debt in capital structure may also result in the cost of financial distress. When the costs outweigh the benefits of using debt, firms will face the possibility of bankruptcy or acquisition. However, the presence of such bankruptcy costs appears to have little relation to the level of debt used, even if they do exist. The reason is that firms use debt when they are aware of business opportunities (Farinha and Santos, 2006; Chung et al., 2013). Meanwhile, using debt also increases investment opportunities by maintaining financial flexibility (DeAngelo and Masulis, 1980; Harris and Raviv, 1991), while business bankruptcy is related to competition in product markets rather than capital structure decisions (Chung et al., 2013).

The pecking order theory, proposed by Myers (1984) suggests that firms prefer internal over external financing to avoid exposure to market scrutiny and potential undervaluation. Firms therefore would prefer to raise internal funds rather than external sources of financing. The priority of using these sources of funding is to minimize the impact of asymmetric information, which helps firms avoid being undervalued by the market. Highly profitable firms then often have low debt ratios as they are financed by internal funds from retained earnings, which also helps to explain a negative correlation between profitability and financial leverage.

Although the pecking order theory explains a firm's financing preferences from the firm's internal perspective, it assumes the existence of financing options. Meanwhile, for newly established firms, information asymmetry originates from the credit supply side rather than the demand side and aggravates the ability to access external finance. These firms are known to have high information opacity (Cassar, 2010; Robb and Robinson, 2014; Miettinen and Virtanen, 2013), a lack of historical data and reputation, and a high risk of failure (Latinien, 1992; Berger and Udell, 1998; Verheul and Thurik,

2001; Farinha and Santos, 2006; Huyghebaert, 2007), thus should face adverse selection and moral hazard, creating challenges for accessing initial capital (Jensen and Meckling, 1976; Diamond, 1991; Nofsinger and Wang, 2011). As a result, these firms will have difficulties accessing bank credits (Stiglitz and Weiss, 1981); or even given the ability, they can only access a smaller credit size and shorter loans to limit unfavorable selections when banks do not supervise due to cost inefficiencies (Ravid and Spiegel, 1987), or are forced to offset bank credit with trade credit (Petersen and Rajan, 1997; Huyghebaert and Gutch, 2007) and even pursue funding from informal channels (Petersen and Rajan, 1994).

In addition to these theories, agency theory (Jensen and Meckling, 1976) provides insight into the costs associated with debt. Accordingly, debt use helps to limit free cash flow, as a tool of debt discipline to avoid the threat of liquidation (Grossman and Hart, 1982), as well as pressure in the business to generate cash flow to repay debt (Jensen and Meckling, 1976). With this approach, debt has a positive effect on business performance of the business. However, under the agency theory approach, borrowing also creates conflicts between creditors and firms (Fama and Miller, 1972). In the case where debt use generates large profits from investments, the owner gets to enjoy most of this benefit. Conversely, creditors will suffer the consequences of risk-shifting incentives. As a result, high-risk businesses will receive less debt.

Both asymmetric information and agency costs also explain why start-ups and small businesses generally receive less debt during the early stages of their life cycle. These firms, often lacking consistent cash flow, resort to debt to bridge resource gaps (Miettinen and Virtanen, 2013). From a lender's perspective, this signals limited financial flexibility and higher risk (Stiglitz and Weiss, 1981; Berger and Udell, 1998). Therefore, only mature firms with well-established historical data on repayment can obtain low-cost loans as the lenders want to limit risk exposure (Harris and Raviv, 1991). Therefore, during early operations, new firms face constrained access to external financing due to both agency conflicts and information asymmetries.

B.   Hypotheses Development

The central argument of this study is that, *ceteris paribus,* firms with higher leverage are expected to produce higher profitability. Getting loans from banks in the first years of operation provides firms with better opportunities due to fewer restrictions by financial constraints and thus a greater degree of financial flexibility.

We consider financial constraints in the capital structure as impediments that limit access to funding, consequently hindering investment opportunities. Firms are considered to be affected by financial constraints if they cannot access funding sources for their activities, so investment opportunities cannot be realized. This situation is quite common for small firms and especially for firms in the early stages of operation because of problems with cash flows and internal funding (Carpenter et al, 2002). Accordingly, we propose the following hypothesis:

H1:   The higher a firm's leverage, the better the performance of new firms.

Moreover, access to formal credit plays a critical role. In environments where formal financing is difficult to obtain, start-ups are more reliant on trade credit, which is

inherently limited and more costly (Petersen and Rajan, 1994). This fact reduces the firm performance. There are three reasons to expect that holding a bank loan for start-ups could be a signaling factor of corporate performance. First, securing a loan from any source relaxes financial constraints on investment. Research by Holt-z-Eakin, Rosen (1994), and Åstebro and Bernhardt (2003) also found evidence for this. Second, obtaining a bank loan can increase a company's reputation with potential suppliers and customers (Best and Zhang, 1993; Åstebro and Bernhardt, 2003; Farinha, 2006; Huyghebeart and Gutch, 2007). Third, the lending indices for a bank loan represent the qualifications of owners and firms that are observable by the lender but not by researchers (Åstebro and Bernhardt, 2003; Farinha, 2006; Huyghebeart and Gutch, 2007). Accordingly, we propose the following hypothesis:

H2:   The higher the bank loan obtained by a firm, the better the performance of new firms.

III.   DATA AND RESEARCH METHODOLOGY

A.   Data Sample

The sample comprises firms newly established in 2010. Following Franck et al., (2010) we investigate a five -year window after start-up, covering from 2010 to 2016. Firms that ceased operations within this period, failed to complete financial statements, or declared bankruptcy without evidence of active business operations (i.e., no reported revenue) were excluded from the sample.

We also remove outliers with negative equity, extremely high leverage, total assets below 500 million VND, or registered capital exceeding 1,000 billion VND. resulting in a total of 1,371 firm-year observations. This sample size is comparable to those used in previous studies on start-ups or SMEs (Huyghebaert and Gucht, 2007; Cassar, 2010; Sanyal and Mann, 2010; Robb and Robinson, 2014). The sampled firms operate across six industry sectors: (1) Forestry and Fishery, (2) Manufacturing, (3) Construction, (4) Trade and Services, (5) Building Materials, Steel, and Energy, and (6) Logistics.

B.   Variables Measures and Model Specification

Drawing on the theoretical framework and existing literature, we employ a linear regression model to examine the effect of capital structure on business performance, consistent with the approach adopted in prior studies. The baseline model is specified as follows:

$$FP_{i,t} = \beta_0 + \beta_1 CS_{i,t} + \beta_2 \sum Control_{i,t} + \varepsilon_{i,t} \tag{1}$$

However, this model may suffer from autocorrelation among variables and potential endogeneity, which is common in corporate finance datasets (Roberts & Whited, 2013). The issue of reverse causality between capital structure and firm performance has been documented (Berger & Patti, 2006; Margaritis & Psillaki, 2010). To address this, we further estimate a dynamic panel model using the GMM, which allows for instrumental variable estimation. The model is specified as:

$$FP_{i,t} = FP_{i,t-1} + \alpha_1 CS_{i,t} + \alpha_2 \sum Control_{i,t} + \varepsilon_{i,t} \qquad (2)$$

where CS is the capital structure measured by Total liabilities/Total assets, and FP is firm performance. Following Franck et al. (2010), we use LEV (total liabilities/total assets) and FP (EBITDA/total assets) as proxies for capital structure and firm performance, respectively. The model incorporates the following control variables:

Firm size (SIZE): Small start-ups are considered riskier than large firms because they can specialize in only one area with low profit margins due to their inability to diversify. The number of products and transactional services is often limited by the lack of reputation in the market as well as strategic and marketing management due to limited human resources. Small firms are also considered to be riskier because they tend to choose projects with higher risks than large firms (Pettit and Singer, 1985; Scherr et al., 1993). Empirical studies also provide evidence that larger firms are likely to achieve higher operational efficiency (Frank and Goyal, 2009; Ebaid, 2009; Sidik, 2013; Vithessonthi and Tongurai, 2015).

Growth Opportunities (GROW): Myers (1977) argues that firms with high growth opportunities have higher agency costs of debt and are likely to borrow less. In contrast, pecking order theory suggests that firms with higher growth have higher capital requirements and therefore are likely to use more debt. New firms do not have many positive net present value (NPV) projects to choose from (Ravid and Spiegel, 1997). Hence, when growth opportunities can be realized, this will create higher profitability.

Asset structure (TANG): Asset structure (measured by the ratio of fixed assets to total assets) is the explanatory variable commonly used in the static trade-off theory model because loans are secured by assets. Mortgages provide a firm with a higher ability to borrow (Myers, 1977). The high ratio of tangible fixed assets in the asset structure may lead to higher financing costs for the enterprise. Therefore, the proportion of fixed assets of the enterprise is expected to have an inverse relationship with the firm efficiency of the newly established firms.

Firm age (AGE): Evans (1987) and Hall et al (2000) showed that age is an important factor in the dynamics of an enterprise. It is also the measure to identify the stages of the firm throughout its life cycle (Yeh and Roca, 2012), the development of reputation along with the availability of information, and the strength of the enterprise (Diamond, 1991; Petersen and Rajan, 1994). Therefore, this is also a factor considered in empirical models of the impact of capital structure on firm performance, especially in studies related to the firm life cycle as in the case of new firms.

Crisis year (CRISIS): In addition, in the content of this article, the extremely difficult years are also controlled in the model. Adverse market shocks negatively affect the demand for goods and limit production and firm capacity when the risk increases. On the one hand, firms will restructure their capital appropriately to minimize risks. On the other hand, they will also adjust their firm activities to adapt to market fluctuations. These effects will have an impact on the relationship between capital structure and firm performance.

Table 1
Description of Variables

Variables	Variable Scales
LEV	Total liabilities/Total assets.
FP	EBITDA/Total Assets
GROW	Revenue growth= (Revenue$_t$ – Revenue$_{t-1}$) /Revenue$_{t-1}$
SIZE	Natural logarithm of total assets
BDEBT	1 = firm has bank loan; 0 = otherwise.
TANG	Tangible fixed assets/Total assets
AGE	Log(Fiscal year - Year of establishment +1)
CRISIS	1 = fiscal year is 2013 or 2014; 0 = otherwise.

C.   Analytical Method

To estimate the effect of capital structure on the business performance of start-ups, we first analyzed panel data with Pooled OLS, Fixed Effects Model (FEM), or Random Effects Model (REM). The Hausman test is conducted to determine the appropriateness of FEM over REM. In addition, the Feasible Generalized Least Squares (FGLS) method is employed to address potential issues of autocorrelation and heteroscedasticity that may violate FEM assumptions.

Despite these adjustments, FEM still faces limitations related to strict homogeneity, endogeneity, and dynamic panel bias. Several studies have attempted to mitigate endogeneity by using lagged explanatory variables (Franck et al., 2010; Margaritis & Psillaki, 2010). This study applies a similar approach; however, lagging may introduce correlation with prior errors, violating the strict exogeneity assumption. The issue becomes more critical when the dataset is characterized by a small time dimension (T) and a large cross-section (N), as is typical in firm-level studies.

To overcome these limitations, we employ the System-GMM estimator developed by Blundell & Bond (1998). This method enables efficient estimation of dynamic panel models under conditions of endogeneity, autocorrelation, and heteroscedasticity. The model is considered valid if it passes the Sargan and Hansen tests for overidentifying restrictions.

The results of these estimations are presented in the next section.

IV.   RESULTS AND DISCUSSION

A.   Descriptive Statistics

Across the entire sample, start-ups mainly use traditional financing sources such as debt and equity. As shown in Table 2, the average leverage ratio among new firms during their first five years of operation is approximately 42.6%. However, bank debt constitutes only 21% of the total capital structure. Among those firms able to access bank loans, the highest proportion of bank debt reaches up to 96% of total liabilities—indicating a strong dependency on formal credit for a subset of start-ups.

Regarding firm performance, the data reveal that profitability during the early years of operation is generally low. On average, the ratio of EBITDA to total assets is only 0.21%, while the maximum observed value for this performance metric reaches

32.58%. These figures highlight the substantial variation in outcomes across firms during their formative stages.

B.   Correlational Analysis

The results of the correlation analysis show a positive relationship between capital structure and profitability before interest and depreciation, in which the correlation coefficient between ROA and total leverage is (0.414). The use of bank debt in the initial capital structure seems to have a significant role in this relationship when the correlation coefficient of the variable representing the use of official loans reaches (0.388). Initial results also show a positive correlation between firm size growth and firm age with profitability, with correlation coefficients of 0.323; 0.397, and 0.096 respectively. The economic crisis factor is negatively correlated with FP reported correlation coefficients of (-0.133).

This direction of impact is also shown quite consistently in the estimation results obtained from the regression models as reported in the next section.

Table 2
Descriptive Statistics

Variable	Obs	Mean	Std, Dev,	Min	Max
FP	1,668	.0021	.1065	-2.7174	.3258
LEV	1,668	.4261	.3167	0	1
SIZE	1,668	21.4605	3.7534	0	28.8441
GROW	1,668	.4762	1.1279	-2.9154	8.9686
TANG	1,668	.2572	6.4024	0	.9418
IND	1,668	2.6726	1.1071	0	5

Table 3
Pairwise Correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
FP	1,000								
LEV	0.324***	1.000							
SIZE	0.337***	0.418***	1.000						
GROW	0.397***	0.213***	0.203***	1.000					
TANG	0.020	0.002	-0.002	-0.024	1.000				
BDEBT	0.388***	0.546***	0.315***	0.281***	-0.014	1.000			
CRISIS	-0.133***	0.013	-0.143***	-.267***	0.034	-0.017	1.000		
AGE	0.096***	0.234***	0.133***	-.187***	0.021	0.079*	0.446**	1.000	
IND	0.166***	0.093***	-0.022	0.084***	0.011	0.197***	0.038	0.000	1.000

C.   Results and Discussions

1.   Empirical Results

Findings from regression analysis with fixed effects show that the increase in debt level has a positive impact on firm performance. This relationship is consistent and statistically significant at the 5% level (Table 4).

Significantly, the research results based on the FEM model show that, on average, an increase of 1% in leverage is related to an increase of about 0.051% in the profitability

based on the EBITDA of new firms. The impact coefficient is not large. However, with the very low profitability reported, this level of impact is significant. The finding shows that start-ups using higher leverage relative to other new firms obtain better firm performance, *ceteris paribus*. In addition, the impact of the relationship between capital structure and firm performance is stronger when a new firm uses bank loans. In other words, the marginal effect of increased leverage on firm performance is greater in the case that the enterprise owns a formal loan from the bank.

Our findings on the positive impact of capital structure on the firm performance of new firms are in contrast with the findings in most studies on mature firms that suggest the debt ratio has a negative impact on firm performance (Friend and Lang, 1988; Titman and Wessels, 1988; Ebaid, 2009; Vithessonthi and Tongurai, 2015; Wang et al., 2014). However, our results are consistent with the evidence given by Franck et al., (2010) showing that debt is proportional to the profitability of new firms. The reason is that using higher leverage brings better operating efficiency because this helps businesses obtain the financial resources necessary to realize business opportunities (Coleman, 2007).

The results of the FGLS model used to overcome autocorrelation and heteroscedasticity also showed that leverage and participating factors in the model both affect the business performance of newly established firms. The GMM estimate gives the result AR (2) with p-value = 0.469 > 0.1, so the model does not have second-order autocorrelation of the residuals. This result proves that the estimated coefficients are stable (Arellano and Bond, 1991). Sargan/Hansen test to determine the appropriateness of the instrumental variables in the GMM model with p-value = 0.348. Therefore, the instrumental variable is exogenous and does not correlate with the error of the model.

Table 4

The Effects of Financial Leverage on the Performance

FP	(1) OLS	(2) FEM	(3) REM	(4) FGLS	(5) S-GMM
FP(-1)					.2212***(3.83)
LEV	0.0254***	0.0501***	0.0357***	0.0212***	.0254***
SIZE	0.0039***	0.0071***	0.0039***	0.0028***	.0031**
GROW	0.0171***	0.0131***	0.0147***	0.0193***	.01121***
TANG	0.0005*	0.0003	0.0003	0.0006***	.0003***
BDEBT	0.0837***	0.0443**	0.0745***	0.0752***	.063***
CRISIS	-0.0234***	-0.0245***	-0.0236***	-0.0194***	-.0320***
AGE	0.0128**	0.0100**	0.0113***	0.0067***	.0113***
IND	0,0095***	0.0223	0.0105***	0.0069***	|.0071 ***
Cons	-0.150***	-0.248***	-0.151***	-0.107***	-.1121***
N	1371	1371	1371	1371	1371

Hausman test: Chi2(8) = (b-B)'((V_b-V_B)^(-1))(b-B) = 19,00 Prob>chi2 = 0,0149
AR(1): z = -2.77 Pr > z = 0.006
AR(2):z = 0.78 Pr > z = 0.465
Hansen test chi2(29) = 34.37 Prob > chi2 = 0.348
t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01

Thus, the positive influence of capital structure on the business performance of new firms is consistent across the tested models, and hypotheses H1 and H2 are accepted at a p-value of 5%. For control variables, the positive effects of revenue growth on firm performance are consistent with most previous studies using mature firms (Majumdar and Chhibber, 1999; Sheik and Wang, 2013; Salim and Yadav, 2012; Pouraghajan and Malekian, 2012; Maina and Ishmail (2014). The negative impact of the extremely difficult year on the firm performance of the firms is also indicated in the regression results. The effects of enterprise age and fixed assets ratio are not significant. These results are consistent with the findings by Margaritis and Psillaki (2010).

When considering the influence of the sector of activity on business performance, the results also differ between different industry groups.

2.   Robustness Check

Based on consideration of the momentum effect of leverage on business performance as done in the study of Franck et al. (2010), in addition to the endogeneity, we also examine the increase in leverage based on a 1-year lag in debt leverage to check the consistency of analytical results on the collected sample. The estimation results support the consistency of the influence direction of the factors in the model as presented in Table 5.

Looking at business sectors in detail, the regression analysis results also show that industry Group 1 (manufacturing), industry Group 2 (construction), industry Group 3 (service trading), industry Group 4 (firms supplying construction materials, steel, and energy), industry Group 5 (firms operating in transportation, ports, and logistics) all have better business performance than industry group 0 (agriculture, forestry, and fishery). The transportation and logistics industry are the group that has better business performance than the rest in this study.

Table 5
The Results of the Robustness Check

FP	Coef,	Std, Err,	T	P > t	(95% Conf,	Interval)
FP (-1)	.2179	.06929	3.4	0,002	.08148	.35429
LEV (-1)	.0222	.00875	2.54	0.012	.00498	.03941
SIZE	.0041	.00162	2.53	0,012	.00091	.00729
GROW	.0129	.00326	3.97	0.000	.00652	.01937
TANG	.0003	.00003	12.07	0.000	.00026	.00035
BDEBT	.0642	.0087	7.42	0.000	.047192	.08129
CRISIS	-.0304	.0029	-10.45	0.000	-.03616	-.02468
AGE	.0096	.0038	2.52	0.012	.00209	.01709
IND						
1	.0254	.0147	1.72	0.086	-.00364	.05439
2	.0290	.0149	1.95	0.052	-.00025	.05830
3	.0391	.0149	2.61	0.009	.00967	.06858
4	.0440	.0158	2.79	0.006	.01292	.07514
5	.0522	.0176	2.97	0.003	.01761	.08680
cons	-.1469	.0390	-3.77	0.000	-.22374	-.07017

AR(1): Pr > z = 0.006   Sargan test : Prob > chi2 = 0.464
AR(2): Pr > z = 0.433   Hansen test: Prob > chi2 = 0.226

D.   Discussion

The findings regarding the positive impact of capital structure on the performance of new firms provide evidence of the role debt levels play in entrepreneurial performance. The early stages of the business cycle are the growth phase, but at the same time, it is also difficult to access external sources of finance due to the lack of historical and reputation data while equity remains relatively insignificant in the total scale of capital. Therefore, if an enterprise can establish a capital structure that allows the expansion of its business activities and increases its revenue and profit, business performance can be improved. Using higher leverage brings better operating efficiency, which can also be explained as being due to being able to obtain the financial resources necessary to realize business opportunities (Coleman, 2007).

These results reinforce the importance of debt financing for start-ups. These findings are consistent with the arguments of Nofsinger and Wang, (2011); Cassar, (2010) argues that the ability to access initial financing is very important in business operations. The lack of capital, as well as difficulty in accessing funding, are cited as a typical barrier to entrepreneurship and considered the biggest barrier to entrepreneurship (Pickernell et al. 2013) because financial constraints limit opportunities to invest in new projects (Atherton, 2012), as well as reduce opportunities for business growth both now and in the future (Korosteleva and Mickiewicz, 2011; Atherton, 2012). This is because firms use debt when they perceive business opportunities (Farinha and Santos, 2006; Chung et al., 2013) and the use of debt also increases investment opportunities by maintaining financial flexibility (DeAngelo and Masulis, 1980; Harris and Raviv, 1991).

The use of formal loans from financial intermediaries increases the efficiency of the firms' business activities. Aside from removing financial constraints, it also demonstrates the role of discipline in business activities. Agency theory (Jensen & Meckling, 1976) suggests that when a firm's assets are financed through debt, the firm is subject to lender oversight, which enforces discipline and accountability.

This study contributes to the literature by providing empirical evidence of the role of bank debt, as demonstrated through the use of the control variable BDEDT. However, this study does not have enough data to conclude whether having a bank loan helps increase the reputation of the business with potential suppliers or is a representative factor for the qualifications of the firm that owners and lenders can observe but not researchers (Åstebro and Bernhardt, 2003; Farinha, 2006; Huyghebaert and Gutch, 2007). However, this result could be suggestive evidence that when a start-up obtains a loan from the bank, it loosens financial constraints on investment (Holt-z-Eakin, Rosen, 1994; Åstebro and Bernhardt, 2003), thus helping start-ups take advantage of business opportunities, increasing the efficiency of the business.

Building on these insights, this study argues that the importance of leverage in capital structure is particularly significant for firms with higher levels of debt—especially those that access formal loans from banks. The results have clear implications for entrepreneurial finance, supporting the strategic use of debt to pursue growth opportunities.

However, the use of high financial leverage also carries the risk of financial distress, which is also a well-known theoretical problem. Newly established businesses are those that are known to be at high risk of bankruptcy (Berger and Udell, 1998; Huyghebaert, 2007) during the first five years of operation. When predicting the

probability of bankruptcy of start-ups, Laitient (1992) is also based on the assumption that these firms have too much debt in the early stages of their operations. However, the results of this study's report on a sample that included bankrupt firms suggest a different reality. An initial examination of the debt ratio of the bankrupt firms in the sample showed that only 14% of all bankrupt firms used bank loans. Besides, the average debt ratio of these firms is much lower than the average value of the sample (1.06%). The low debt ratio is shown in all three aspects (1) the low number of firms using debt; (2) The small size of the loan; and (3) Very few firms that fail in the early stages of establishment use bank loans. The poor performance of these firms stems from their inability to generate sufficient revenue to achieve profitability. Research by Dao et al., (2020) also shows that the bankruptcy risk of small and medium firms in Vietnam does not come from signs reflecting financial distress from using high leverage but from operating inefficiently, thus failing to compete and dominate in the market to able to generate enough revenue to cover costs and continue to exist and develop. Therefore, the positive effect of financial leverage on the business performance of newly established firms in this study does not include the identified risks of financial distress.

Nonetheless, some caution is warranted. Several studies have proposed that firms may avoid debt not only due to financial constraints but also because of the risk preferences of entrepreneurs (Cressy, 1996; Ravid & Spiegel, 1997). Although our data do not allow us to formally test this hypothesis, the possibility remains that risk-averse entrepreneurs, even in the absence of credit constraints, choose to commit fewer resources. As a result, they establish capital structures with lower debt levels and, consequently, achieve more limited business performance (Zahra & Covin, 1995; Mason et al., 2015; Than et al., 2020). Thus, while unobserved factors such as risk aversion may explain the behavior of firms with low debt utilization, these do not contradict our findings of a positive relationship between leverage and performance among young firms, ceteris paribus.

V.   CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH ORIENTATION

Our findings indicate a positive relationship between initial capital structure decisions and the performance of new firms. The finding also suggests that formal debt can contribute to the success of firms in the early stages of the business life cycle. The reason for this is that start-ups using high debt leverage can have better resources, knowledge, and capabilities that cannot be observed in their financial statements. Firm owners can also be reputable entrepreneurs and have personal assets and prior firm experience, so they can make better firm decisions with fewer credit constraints.

These results can be interpreted through the lens of agency cost theory, particularly in the relationship between corporate managers and financial institutions. Newly established firms in an emerging economy like Vietnam are mainly managed by owners. Therefore, the agency problem is not present. Borrowing arises from the actual need to expand the business or carry out profitable projects with a certain level of risk under the entrepreneur's control. Firm owners tend to be more cautious when using bank loans to avoid liquidation of personal mortgages, which are usually personal real estate owned by the owner's family. Therefore, when the agency problem is reduced, new firms that have investment opportunities tend to borrow more to get higher performance.

Our findings contrast with the commonly observed negative relationship between leverage and performance in mature firms. This aligns with the results of Dao and Ta (2020), whose meta-analysis confirmed that the negative effect of leverage is more prominent in larger, mature firms operating in developed capital markets. The capital structure of new firms in specific circumstances is more affected by credit supply than capital need. Financial constraints for new firms are seriously caused by the problem of asymmetric information. Therefore, when there is a lack of history, the reputation of the firm will be reviewed through the reputation of the firm owner which determines the relationship with the supplier and the bank. The collateral used to make formal loans comes mostly from the personal property of the firm owner. Once credit barriers are lower, start-ups have the opportunity to fund better projects to increase firm efficiency right from the initial years of operation.

However, high debt leverage, in addition to the fact that owners have better access to external debt than other businesses from establishing an early relationship with the Bank, or connections to personal assets may also reflect risk-taking propensities (having a preference for taking risks), which we did not observe concurrently with credit constraints in this study compared to other firms, *ceteris paribus*, as suggested in the study of Cressy (1996) and Ravid and Spiegel (1997). If this is indeed a potential factor driving start-ups to establish a debt-inclined capital structure to realize investment opportunities, further research is needed as a primary question concerning the relationship between capital structure and business performance of young firms, connecting entrepreneurship and capital structure, which may help to better explain the financing behavior of young firms to improve the business efficiency of newly established firms. Lastly, we acknowledge a limitation of this study: the lack of extended longitudinal data. A longer observation period could offer a clearer distinction between the effects of capital structure in early versus mature phases of firm development. Future studies should consider this approach to further explore the dynamics of capital structure optimization across different stages of the business life cycle, in line with the dynamic trade-off theory.

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