THE DETERMINANTS OF CAPITAL STRUCTURE: A CASE STUDY

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Abstract. This paper investigates the determinants of capital structure of business start-ups utilizing simultaneously a survey of business owners’ characteristics and data collected from financial reports submitted to the taxation authorities of 268 newly established enterprises in Hanoi. The results have indicated that most of the hypotheses are accepted and consistent with relevant theoretical models. However, unlike existing studies on the capital structure of startups in developed nations, the influence of a start-up size, profitability, work experience based on relationships prior to starting up a new company, growth orientation and the age of a business are the major determinants of the initial capital structure decision while the asset structure, organizational type, gender, age of owner and education level of business owners does not seem to have a significant impact on the choice of capital structure in the context of transitional economies and financial markets that are not quite developed, such as in Vietnam. The major findings are discussed based on the trade-off theory and the pecking order theory. The article also provides some implications and recommendations for future research.

Keywords: start-ups; capital structure; performance; crisis; financial leverage; Hanoi


JEL Classifications: G00, G390

1. Introduction

In most countries, besides government subsidies or loans, equity from venture capital funds such as business angels or venture capital funds, the capital structure choices of startups are primarily based on the main sources of capital: the business owners' equity from family, friends and personal savings, his or her loans from banks and suppliers (Huyghebeart, 2004, Rob and Robinson, 2010) to fund assets as well as maintain business operations. Bank credit and commercial credit play an important role for businesses in the first two years of operation (Berger and Udel, 1998; Rob and Robinson, 2010, Schwarz, 2018, Ravid and Spiegel, 1997; Mackevičius et al., 2018; Włodarczyk et al., 2018; Isatayeva et al., 2019).

Research by Huyghebeart et al (2007) also shows that, with the highly value private benefits of control, newly established firms tend to substitute bank credit with commercial credit to avoid the risk of liquidation. However,
in developing countries whose financial market is as young as in Vietnam, asymmetric information seems to be more of a serious issue. Therefore, it is difficult for businesses to access formal credit sources due to credit constraints stemming from credit supply (Ravid and Spiegel, 1997), or bias towards start-up firms in particular and SMEs in the private sector (Thang, Ngoc 2012) are also considered one the causes of this situation.

In general, the capital structure of newly established firms has different circumstances due to differences in the business cycle. Meanwhile, the establishment of capital structure is based on the availability of credit supply, so debt use seems to be more difficult for startups in developing countries. The question is, during the early stage of financing, what are the factors affecting the capital structure of the business? Carrying out this approach, based on the framework of capital structure theory and the findings from existing empirical research, we have developed the hypothesis of the factors influencing capital structure in the context of transition economies from the panel data with a sample size of 269 new enterprises.

These findings help contribute to a richer understanding of capital structure constraints in the cases of newly established firms, which have distinct characteristics of the first stage of business compared to those of mature businesses or listed companies, and large corporations.

2. Research literature review

2.1 Theoretical background

Although not directly referring to the case of newly established firms, the pecking order theory, agency cost theory and tradeoff theory are significant nonetheless and contribute to the explanation of how decisions having to do with the capital structure of young businesses are made.

The pecking order theory suggests that there is no optimal level of leverage, instead, the level of corporate debt depends on the situation of the business over time. As a result, start-ups facing restrictions in cash during their early stages of operations will use their debt to cover capital shortages (Miettinen and Virtanen, 2013).

However, the agency cost theory points out that the contradiction between creditors and startups will more likely limit the ability to use debt of young enterprises than old businesses, because from the viewpoint of the owners, incentives of using debt can stimulate young entrepreneurs to make risky investments or have a negative net present value.

The above is explained by Modigiliani and Miller’s approach (1958) based on the issue of asymmetric information that influences the initial financial decision and the terms of use of the debt (Ravid and Spiegel, 1997; Huyghebeart et al., 2007) facing the concern that changes in lenders’ behavior might lead to creditors’ losses when loans are disbursed. Only mature businesses with well-established historical data on debt repayment can possibly access low-cost loans. (Harris and Ravid, 1991). Smaller new businesses containing higher risks will likely receive a smaller amount of debt (Stiglitz and Weiss, 1981; Berger and Udell, 1998).

To reduce the problem of asymmetric information in the relationship between start-ups and debt owners, some studies suggest that it is important to optimize loan contracts by demanding that loans be secured with collateral (Ravid and Soeigle, 1997) or to lend at higher interest rates to hedge against higher probability of default (Berger và Udell, 1998; Huyghebeart và Gutch, 2004).
2.2 Literature review
While the studies on the determinants of capital structure of mature firms have built up a massive amount of documents, the studies on the sample of start ups are fairly scarce. Among many factors examined, four factors including asset structure, firm size, investment opportunities and profitability are considered factors that demonstrate the correlation with leverage of old firms consistently (Rajan và Zingales, 1995; Frank và Goyal, 2004).

In the case of newly established firms, existing studies have shown the role of the above factors in the research models, but the results have not reached an agreement point. According to Ando (1998); Cassar (2004); Sanyal và Mann (2010) and Huyghebeart (2004), firm size and asset structure strongly affect the total leverage, long term leverage, rate of banking debt and external debt (Cassar, 2004). However, Scherr và Sugure (1994) only agree with the impact of business size on official leverage. The impact of growth opportunities and profitability on the decisions of capital structure of start ups is recorded by only very few studies.

In addition, new businesses have very little information about history of business operation and these firms are thought to have the most opaque information (Berger and Udell, 1998). These characteristics severely affect the accessibility of official credit resources of new firms because banks lack information to assess loans. In order to overcome this problem, some studies have shown that characteristics of owners could play an important role in the financial decisions of creditors. This approach is derived from the suggestion of Bates (1991) and Ando (1998) that factors such as education levels, work experience, age, gender and start up skills that entrepreneurs acquired before starting up make an impact on business performance of new entrants. Therefore, they are accepted by investors as factors involved to business prospects. In other words, ownership characteristics represent human capital that provides some additional predictive information on explaining the decisions of capital structure of newly established firms besides the elements of the characteristics of the business as mentioned above.

Following that study approach, Miettinen and Virtanen (2013) focused on the examination of owner-attribute factors only, in order to illustrate the importance of non-accounting features in explaining the capital structure of new company. However, most other studies have not yet obtained satisfactory answers to the relationship between ownership factors and the level of debt used. In particular, the influence of ownership characteristics on financial leverage differed among different studies. For example, Miettinen and Virtanen (2013); Robb and Robinson (2010); Sanyal and Mann (2010) affirmed the importance of work experience and industry experience to debt use, whereas Cassar (2004); Scherr and Surgue (1993) found no evidence of how these characteristics have significant effects on the capital structure of newly established firms.

When considering factors such as age and sex, studies have consistently indicated that the owner's age has the opposite effect on the use of debt (Robb and Robinson, 2010; Scherr and Surgue, 1993) and enterprises owned by males tend to use more debt than those operated females (Schouten, 2019; Thandabhani, 2020).

Industry factor is also examined in a number of existing studies when considering the capital structure of firms in the initial stage of operations. However, the effects of these factors are only significant for individual studies. For example, some studies have shown that new firms operating in the fields of transportation and essential services use more debt than firms in other industries (Scherr and Surger, 1993). Also, high-tech firms tend to use external equity rather than bank loans (Colombo and Grilli, 2005), while firms operating in traditional industries do not use venture capital in the beginning. (Huyghebeart and Gutch, 2004).

As can be seen, in the case of newly established firms, existing studies have attempted to link elements of enterprise ownership and enterprise characteristics to clarify the factors affecting the capital structure during the initial financial period. However, the research on this issue is very scarce, focusing mainly on economically
developed countries. Meanwhile, the study of capital structure on the sample of mature businesses cannot represent startups because of the differences in financial demand, debt use and dependence on the supply side during their early stages. In addition, most existing studies that we have got have been carried out a long time ago.

Meanwhile, in developing countries, the start-up ecosystem issues are starting to be noticed just recently. The question being posed is that in the current context in developing countries, particularly Vietnam which has a transition economy, how will the sector of state enterprises establish their initial capital structure, and what are the determinants affecting the capital structure of new entrants. These questions being answered is extremely significant, since understanding the initial choices of capital structure is, on one hand, a basis to testify how decisions of capital structure affect how the business operates and thrives. On the other hand, it provides information on the distributive mechanism of credits of the market, which can be a factor making an impact on the success rates of young businesses, especially in financial markets that are underdeveloped in countries with a transition economy.

Research model

Research based on the frameworks of the static theory of capital structure and the pecking order theory in explanations of elements affecting capital structure for enterprise characteristics including size, asset structure, profitability, growth potential, liquidity and the legal form of the business. In addition, age, gender, and years of experience representing the characteristics of ownership are also examined.

Hypotheses

Newly run businesses are considered to be at high risk because of their new entrance, low competitiveness and vulnerability. In addition, with a lack of operational data and transparency of information on financial statements, these businesses face serious asymmetric information problems when accessing loans. Then, according to Titman and Wessel (1998), the size of the business is viewed as a function related to the transaction costs that help reduce the problem of information asymmetry. Therefore, this factor also affects the level of debt that enterprises can access.

Hypothesis H1.1: Firm size has a positive impact on the leverage of newly established firms

The agency cost theory (Jensen and Meckling, 1976) illustrates a negative relationship between the use of debt and growth opportunities by the benefit conflict between the creditor and the shareholder. However, according to Huyghebeart (2004), new firms have the advantage of being in control so they are often unwilling to borrow, in order to avoid risk. Loans are considered when businesses are quite sure about the effectiveness of the investment. At the same time, Cassar's (2010) study suggests that this problem can be mitigated if young start-ups use short-term debt instead of long-term debt. Therefore, it is possible to expect a positive relationship between growth potential and the capital structure of the enterprise.

Hypothesis H1.2: Growth has a positive impact on capital structure of newly established firms

The relationship between profitability and the level of debt used in the capital structure of enterprises so far has not reached an agreement on the direction of influence. The tradeoff theory suggests that the profitable firms with a cost of financial exhaustion have lower expectations and can approach benefits of the tax shield from debt. Therefore, businesses will tend to use more debt to take advantage of the tax shield. In contrast, the pecking order theory implies that more profitable businesses will have less debt to reduce the amount of profit they have to share.

In the case of newly established businesses, credit is considered not available in the early stages of the business cycle. At the same time, young businesses in this period also face limited cash-generating capacity (Miettinen and Virtanen, 2013) as well as insufficient cumulative profitability (Berger and Udell, 1998). Consequently, the study argues that tax benefits from debt may not yet be a priority for new businesses during this period. In contrast, discipline from debt can
be more significant for profitable businesses, especially those with the serious problem of free cash flow (Jensen and Meckling, 1976). Based on these arguments, in the early stages of operations, in order to increase the likelihood of accumulating profits, more profitable businesses will use more debt.

**Hypothesis H1.3: Profitability has a positive impact on the leverage of newly established firms**

The tangible assets of a business often being referred to as a collateral that secures loans in order to reduce the possible financial losses on creditors are a widely recognized issue. According to Haris and Ravid (1991); Titman and Wessels (1998); Ravid and Spiegel (1997) for businesses having a bigger problem of information asymmetry, the cost of adverse selection will be reduced if the sponsorship agreements are based on the assurance of a particular asset. Thus, in the case of start-ups, due to the lack of operational history and transparency of information, and the elements that represent commitments of the reduction of risk for investors, the structure of the assets will significantly influence the ability to use debt in the initial capital structure of an enterprise. Therefore, the study proposes

**Hypothesis H1.4: Asset structure has a positive on the leverage of newly established firms**

In terms of liquidity, the static tradeoff theory suggests that firms with poor liquidity may face higher financial costs, given that other factors remain unchanged. Therefore, these businesses should use less debt. At the same time, poor short-term liquidity will harm the parties involved in the business investment. As a result, creditors will limit lending to businesses that lack cash flow. This judgment is also considered appropriate for start-ups when banks consider lending decisions. Based on this argument, the study suggests an opposite relationship between the liquidity and capital structure of newly established firms.

**Hypothesis H1.5: Liquidity has a negative impact on the leverage in capital structure of newly established firms**

The characteristics of ownership are considered an influence on the initial capital structure decisions of newly established firms. On the one hand, information about the business owner might be able to make up for the lack of information on the history of operation of the business in lenders’ decisions. On the other hand, the characteristics of ownership help justify the initial capital structure decision, as such decisions somewhat depend on how willing the business is to take necessary risks. Factors such as age, gender and education levels are also examined in studies on financing new businesses, specifically:

- The older the business owner, the more experience he or she has, and the more considerate he or she is in their financial decisions, the more likely the bank will be willing to give out loans;

- On the education background of the business owner, the study argues that as education contributes to business success for startups or small companies, business owners with higher levels of education might have an easier access to debt and have higher debt level in the capital structure;

- Gender is also considered a factor that influences the amount of debt used, suspected to be related to the differences on a person’s willingness to take risk. One of the studies suggest that businesses owned by females tend to have a lower level of debt use since they are more reluctant to take risk than their male counterpart.
From the points stated above, the study suggests several hypotheses on the influence of the characteristics of ownership on the decisions of capital structure of new businesses as follows:

**Hypothesis H2.1:** Business owners with higher levels of education and/or more experience in the same field of business are more likely able to access and use more debt in the initial stage of starting up.

**Hypothesis H2.2:** New businesses managed by males or business owners that are older in age have a higher debt ratio in the initial capital structure.

Along with controlling the effects of the industry variable on the initial decisions of capital structure of new businesses, the research model is suggested as follows (see Table 1):

\[
CS_{i,t} = \beta_0 + \beta_1 \text{SIZE} + \beta_3 \text{TANG} + \beta_4 \text{LIQ} + \beta_5 \text{PROFIT} + \beta_6 \text{GEN} + \beta_7 \text{AGE} + \\
+ \beta_8 \text{EDU} + \beta_9 \text{EXPR} + \epsilon_{i,t}
\]

<table>
<thead>
<tr>
<th>N</th>
<th>Variables</th>
<th>Scales</th>
<th>Researches</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LEV, SLEV, LEV1</td>
<td>Financial leverage of firms i, year t = Total liabilities/ Total assets; short debt/ Total assets and( Loan + credit trade)/Total assets</td>
<td>Harris, Raviv (1991); Huyghebeart, Gucht(2004, 2007); Frank và Goyal (2009); Anchor (2007); Rajan và Zingales (1995);</td>
</tr>
<tr>
<td>2</td>
<td>SIZE</td>
<td>Firm size measured using the natural logarithm of total turnover for firm i in year t, expressed in VND</td>
<td>Sanyal và Mann, 2010; Rajan và Zingales, 1995; Huyghebeart và Gucht(2004, 2007; (Robb và Robinson, 2010); Harris, Raviv (1991);</td>
</tr>
<tr>
<td>3</td>
<td>GROW</td>
<td>Growth = ( Total assets year( t) – Tootal asset year(t-1))/ Total assets year(t-1)</td>
<td>Chittenden et al (1996); Capenter and Petersen (1998); Margarits and Psillaki (2010)</td>
</tr>
<tr>
<td>5</td>
<td>TANG</td>
<td>Asset structure = Tangible assets/ Total assets</td>
<td>Frank và Goyal (2009),</td>
</tr>
<tr>
<td>7</td>
<td>GEND</td>
<td>Gender of owner: A binary variable takes the value of 1 if the owner is female, male takes the value 0.</td>
<td>Cassar (2004); Creesy (1998); Scherr và Sugrue, 1993</td>
</tr>
<tr>
<td>8</td>
<td>AGE</td>
<td>Age of entrepreneur at operating year i</td>
<td>Cassar (2004); Creesy (1998); Scherr và Sugrue, 1993</td>
</tr>
<tr>
<td>9</td>
<td>EDU</td>
<td>Education level: A binary variable takes the value of 1 if the owner of firms received a degree above the bachelor’s, others take the value 0</td>
<td>Cassar (2004); Scherr và Sugrue, 1993</td>
</tr>
<tr>
<td>10</td>
<td>EXPR</td>
<td>Working experience = natural logarithm of the total years that the owner of the firm I worked in the same start up sector</td>
<td>Cassar (2004); Scherr và Sugrue, 1993</td>
</tr>
</tbody>
</table>

*Resource: Author’s collection*
3. Research methodology

3.1 Sample and data collection

Our first raw data set consists of 312 truly operating new firms that were registered for establishment at the Hanoi Department of Planning and Investment and given a tax registration number by the Hanoi Tax Department in 2010 and observed in the initial 5-year period. We collected a sample including enterprises established at the same time to ensure greater homogeneity in macroeconomic condition at the moment of foundation depending on suggestion given by Huyghebeart & Gutch (2004). The sample was collected using the following method of proportionate stratified sampling depending on the number of firms distributed on every district in Hanoi.

We excluded 38 firms from the original sample include 21 firms had incomplete financial statements or information recorded on these statements, 17 others firms had negative equity, which causes the possibility of making detorted ROE as well as exaggerating overdose financial leverage and 5 others were filtered out of the data set because they had very small total assets (4 firms have less than 500 millions VND) or having outlier authorized equity (one firm with authorized equity of more than 1.000 billion VND). The final sample consists of 169 firms with 1614 observations. A sample size used in regression analysis is quite homologous compared to recent studies on start-ups or small and medium enterprises samples.

Firms in the sample were divided into over six industries (Agriculture, Manufacture, Construction, Service and Trading, Construction Materials and Transportation), based on current regulations issued by the General Statistic Organization and criteria of industrial classification proposed in the annual enterprise survey reports of VCCI.

3.2 Data analysis

We used a package of STATA software version 12 to estimate the regression equations that we proposed above. First off, bivariate relations among variables were explored via examining correlation. Then, we used ordinary least square (OLS) to examine the effect of leverage to business performance. Then, Hausman’s test was employed to discover which models are more suitable for the data set between Fixed Effects Model (FEM) and Random Effects Model (REM). The result suggests that FEM is suitable for the character of data in this research. The research also examined some necessary test for regressive assumption to ensure the result of regression is blue such as autocorrelation, multicollinearity and heteroskedasticity.

Finally, to validate our research results, the robust option was performed to recalculate standard errors in case the models violate regressive assumptions.

4. Research results

4.1 Descriptive statistics on the capital structure of newly established firms

Table 2 provides descriptive statistics on capital structure of newly established firms for our sample. The results show that start-ups mainly used traditional finance including debts and equity in the initial capital structure.

Unlike new ventures in developed countries, outside equity and sponsored finance from Government did not find in detail report of any firms in the sample. Only two firms report about a leasing in their balance statements. This is also difference with finding about using leasing to compensate credit shortage of start-ups in the initial years of operation.
Table 2. Descriptive statistics of the capital structure of newly established businesses

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>mean</th>
<th>p50</th>
<th>sd</th>
<th>min</th>
<th>max</th>
<th>cv</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEV</td>
<td>1614</td>
<td>.4396</td>
<td>.4419</td>
<td>.3121</td>
<td>0</td>
<td>9994</td>
<td>.7099</td>
</tr>
<tr>
<td>SLEV</td>
<td>1614</td>
<td>.4111</td>
<td>.3773</td>
<td>.3099</td>
<td>0</td>
<td>9994</td>
<td>.7538</td>
</tr>
<tr>
<td>LLEV</td>
<td>1614</td>
<td>.0285</td>
<td>0</td>
<td>.1170</td>
<td>0</td>
<td>9279</td>
<td>3.2368</td>
</tr>
<tr>
<td>LEV1</td>
<td>1614</td>
<td>.3375</td>
<td>.2853</td>
<td>.2990</td>
<td>0</td>
<td>9869</td>
<td>.8860</td>
</tr>
<tr>
<td>LEV2</td>
<td>1614</td>
<td>.1543</td>
<td>0</td>
<td>.2330</td>
<td>0</td>
<td>9322</td>
<td>1.5098</td>
</tr>
<tr>
<td>TDTM</td>
<td>1614</td>
<td>.1842</td>
<td>.0935</td>
<td>.2205</td>
<td>0</td>
<td>9743</td>
<td>1.1972</td>
</tr>
<tr>
<td>VCSH</td>
<td>1614</td>
<td>.5603</td>
<td>.5580</td>
<td>.3121</td>
<td>.0005</td>
<td>1</td>
<td>.5570</td>
</tr>
</tbody>
</table>

Resource: Author’s evaluation

Regarding to difference financial resources used in the first initial five years of operate, start-ups used average finance leverage (LEV) around 44% on total liabilities. The percentage of credit trade is not high, less than 18.5%. Similarity, average bank loan rate (LEV2) also take only approximately 15.5% in which focus mainly in short term debt. Long-term debt take only 2.8% on total liabilities. This finding indicate capital structure of start-ups in the sample use percentage of bank loan and credit from suppliers much lower and percentage of equity much higher than peer in developed contries (see also Huyghebeart & Gutch. 2007; Robb & Robinson. 2010).

4.2 Results

The results (Table 2) show that the positive effects of firm size, growth and profitability are consistent on all 3 scales of capital structure including total leverage, short term leverage and outside debt leverage across the research. The increase in factors such as firm size, growth and profitability are factors that cause the overall debt to go up. The coefficients reported for these variables in turn are (0.031), (0.244), and (0.044). This finding is consistent with the majority of studies both in young and mature firms (Frank và Goyal, 2009; Huyghebeart và Gutch, 2004; Cassar, 2004).

Factors related to liquidity and asset structure have a negligible impact on the capital structure of newly established firms presented on the sample, although the dimension of the impact is supported by the majority of the existing studies. The coefficient of liquidity reported is (-0007).
Table 3. Models of factors affecting the capital structure of new businesses

<table>
<thead>
<tr>
<th></th>
<th>(1) OLS LEV</th>
<th>(2) FEM LEV</th>
<th>(3) OLS SLEV</th>
<th>(4) FEM SLEV</th>
<th>(5) OLS LEV1</th>
<th>(6) FEM LEV1</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>0.067***</td>
<td>0.031***</td>
<td>0.064***</td>
<td>0.032***</td>
<td>0.065***</td>
<td>0.037***</td>
</tr>
<tr>
<td>GROW</td>
<td>0.074***</td>
<td>0.044***</td>
<td>0.074***</td>
<td>0.046***</td>
<td>0.047***</td>
<td>0.039***</td>
</tr>
<tr>
<td>PROF</td>
<td>0.412**</td>
<td>0.244</td>
<td>0.363**</td>
<td>0.273*</td>
<td>0.420**</td>
<td>0.141</td>
</tr>
<tr>
<td>TANG</td>
<td>0.000</td>
<td>0.001***</td>
<td>0.0001*</td>
<td>0.001***</td>
<td>0.001***</td>
<td>0.001***</td>
</tr>
<tr>
<td>LIQ</td>
<td>-0.000**</td>
<td>-0.001***</td>
<td>-0.000*</td>
<td>-0.001***</td>
<td>-0.000</td>
<td>-0.000**</td>
</tr>
<tr>
<td>GEN</td>
<td>-0.025</td>
<td>0.088***</td>
<td>-0.023</td>
<td>-0.051***</td>
<td>0.002</td>
<td>-0.039**</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.003</td>
<td>-0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>EDU</td>
<td>-0.02</td>
<td>-</td>
<td>-0.031*</td>
<td>-</td>
<td>-0.06***</td>
<td>-0.048</td>
</tr>
<tr>
<td>EXPR</td>
<td>0.112***</td>
<td>0.100***</td>
<td>0.071***</td>
<td>0.06*</td>
<td>0.089***</td>
<td>0.077***</td>
</tr>
<tr>
<td>_cons</td>
<td>-1.147***</td>
<td>-0.374</td>
<td>-1.096***</td>
<td>-0.441</td>
<td>-1.131***</td>
<td>-0.608**</td>
</tr>
<tr>
<td>N</td>
<td>1314</td>
<td>1314</td>
<td>1314</td>
<td>1314</td>
<td>1314</td>
<td>1314</td>
</tr>
<tr>
<td>R² adj (%)</td>
<td>29.2</td>
<td>14.79</td>
<td>24.87</td>
<td>10.25</td>
<td>24.73</td>
<td>11.48</td>
</tr>
<tr>
<td>Hausman</td>
<td>Prob &gt; chi²(8)(=298.170) =.0000</td>
<td>Prob &gt; chi²(8) (= 53.22) =.0000</td>
<td>Prob &gt; chi²(8) (= 36.85) =.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other findings in the sample of newly established firm is that new businesses are run by males having working experience in the same business sector tend to use more debt, ceteris paribus. These results match the findings of Scherr và Sugrue (1993); Robb và Robinson (2010) stating that female entrepreneurs tend to be more risk-averse, thus using less external debt to finance business operations than male business owners. However, this relationship was not statistically significant (at 5%) in OLS and FE models reported above.

The results also show that there is insufficient evidence to conclude that the age of the entrepreneurs influences the leverage in the early stage of business operation, although the regression analysis result also suggests a positive relationship somewhat similar to that of Cressey (1996) và Cassar (2004). The effect of this factor was not significant (at 5%) in all models.

The effect of the business owner’s education background is also examined in the models. However, the results do not provide any evidence that a higher level of education leads to higher levels of debt use. This effect was not statistically significant in all OLS models according to the different scales of capital structure; however, it was determined in the fixed FE models.
5. Conclusions

In conclusion, the capital structure of newly established enterprises is affected by both side - the supply and demand of capital. On the one hand, the choice between debt and equity to finance business operations bases on investment opportunities, profitability as well as risks that enterprises might face with the bankruptcy. On the other hand, capital structure of new entrants is also influenced by the availability of credit of the region or country where the enterprise operates. In addition, the risk tolerance might have certain effects on the capital structure of newly established firms. That is the new factor, which is initially identified in this research.

Newly established enterprises find it difficult to access the capital market for a number of reasons, including high fixed cost (transaction costs) and the unwillingness of financial institutions to invest in small equity investments. In addition, banks are often reluctant to lend short-term and medium-term loans to newly established small businesses. The main results summarized from the study are as follows:

Firstly, the research show that newly established enterprises depend mainly on retained earnings, equity and internal debt. This is in line with the Pecking order theory. It is also consistent with the suggestion from Trade-off theory which is demonstrate that newly established small companies have higher risk so they use les debt than other companies (Harris and Ravid, 1991)

Secondly, newly established enterprises tend to use more short-term debt. The result is explained from external investors due to the asymmetric information. These are unobserved factors. Thus, with the indicators that can be established in the model, profitability, business size and growth potential are the three factors positively and strongly effected to debt level in companies measured by total debt ratio, short-term debt and external debt. Agency theory and Pecking-order theory suggest that, firms with opportunities of high growth and profitability use less debts. However, the equity of new entrants is not available. They have less opportunities to invest in the projects with positive NPV such as mature firms (Ravid and Spiegel, 1997). As the result, new companies with high growth potential and profitability are likely using more debt and mainly short-term debt to mitigate the asymmetric information. (Cassar, 2004).

Thirdly, the relationship between capital structure of newly established enterprises and personal finance and ownership characteristics. According to the financial literatures, the asset structure plays an important role in determining the capital structure because tangible assets constitute collateral for the debt. However, the impact of tangible asset on capital structure in the case of Hanoi new established enterprises does not support the above mentioned opinion. In other words, the use of debt in new entrants is less concerned to their investment in tangible assets. This result gave the suggestion about the relationship between the capital structure of new entrants and the finance of the owners. Besides, it also suggested that the wealth of owners, might be a factor influenced to capital structure of new entrants in the initial stage of business, need to be further examined. In addition, gender and age of the owners in new entrants might be the factors determine the capital structure of new established firms related to the ability of risk tolerance and control on the business. These factors should be further examined in following researches.
References


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