

Firm Characteristics and Leverage: Empirical Evidence in China

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Abstract. Small and medium enterprises (SMEs) have been continuously contributed to an economy. Unfortunately, there are however some restrictions on the growth of SMEs as it face difficulties in accessing to external financing resources, particularly debt financing instruments. Stricter credit policy and shorter term loan financing are some of the obstacles that are facing by SMEs and as such, its business sustainability may be a prominent issue in an economy. So, what are the antecedents of debt financing available to the SMEs? This study provides empirical evidence on some firm specific characteristics as the determinants of the extent of debt financing of a sample of 200 SMEs in Jiangsu, China. The findings of this study indicate that firm size and asset tangibility are positively related to the firm leverage. However, firm profitability is not seen to be the determinant of firm leverage. This study is relevant as it provides insight to the SMEs in Jiangsu province that it would be easier to obtain debt financing source for a larger firm or firm with more tangible assets resources than the other counterparts.

Keywords: Leverage, Capital Structure, Jiangsu, Size, Asset Tangibility and Profitability.

1. Introduction

The importance of small and medium enterprises (SMEs) has been well recognised from all around the world as they have great contribution to the economic development, especially in creating job employment in an economy. The development of SMEs continues to be at the forefront of economic development and thus, the government departments have been pursuing more effective measures to accelerate the growth of SMEs. However, SMEs are mainly facing with the problem of lack of financing sources. Therefore, the ability and sustainability of SMEs to develop further is becoming crucial to an economy. In order to be more sustainable, SMEs need to obtain more external financing than the scarce internal financing sources.

Success in obtaining external financing resources has become a challenge to the SMEs. For instance, the SMEs have to compete with the larger firms that have more collateral to offer in exchange for the debt financing. In addition, SMEs that are perceived as having higher risks as compared to their larger counterparts would normally be able to obtain shorter than longer term of debt funds. On the basis of above discussion, this study aims to examine if firm specific characteristics could have an effect on the extent of debt financing of the SMEs.

2. Literature Review

2.1. Determinants of Capital Structure

Capital structure refers to the proportion of relative amount of debt and equity used to finance a firm. Debt financing depends on the credibility of the borrower of which will be thoroughly assessed by the lender in order to minimize the credit risk which may be suffered by the lender. The debt financing structure of a firm may vary by the firm size, profitability and asset tangibility. In other words, firm characteristics play an important role in determining the success and amount of debt financing. The combination of proportion of the financing sources from equity and debt would determine the capital structure of a firm. Firm has to strike for a balance between internal and external financing strategy in order to maximise its wealth.

The results of an empirical study performed on 5000 SMEs in Australia provide evidence that firm size and the level of debt financing are positively correlated (Romano et al., 2000). In addition, Cassar and

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Holmes (2003) found that firm size and asset structure have a positive association with the level of debt. However, firm profitability is negatively associated with the level of debt, has been observed in the same study. Above studies concentrated on cross-sectional mode and the results may be more robust if a longitudinal study has been performed. Johnsen and McMahon (2005) performed a longitudinal study across the SMEs in Australia and further confirmed that firm size and asset structure are positively correlated with long term debt.

Conversely, prior empirical studies on UK property firms indicated an inverse relationship between firm size and leverage, which is contrary with the trade-off theory (Ooi, 1999). In the same study, it has also been observed that the level of firm profitability does not play a role in determining the leverage ratio of a firm.

As for the empirical studies in China, inconsistent results were observed for the impact of some firm specific characteristics on the level of leverage. Positive association between firm size and leverage has been observed in some studies (e.g. Bhabra et al., 2008; Huang and Song, 2006, Qian et al., 2009) while negative association noted by Chen (2004). In addition, negative association between firm profitability and leverage has been observed in some studies (e.g. Bhabra et al., 2008; Huang and Song, 2006, Qian et al., 2009) while positive association noted by Chen (2004). In summary, the influence of firm size and profitability on leverage has been inconsistent for SMEs in China. However, positive association between the level of tangibility of firm asset and leverage has been consistently observed in the Chinese SMEs (e.g. Bhabra et al., 2008; Chen, 2004, Huang and Song, 2006, Qian et al., 2009).

Review of past literature provides some insights on the importance of firm specific characteristics in determination of the level of leverage of SMEs in both developing and developed countries.

3. Research Methodology

Over the past twenty years, contributions of SMEs to the economic growth of China have been well recognized (Chen, 2006; Dougherty and Herd, 2005). Despite of such contribution, China SMEs faces difficulty in obtaining loans from the financial institutions for future expansion (Bai et al., 2006). This study is specifically conducted on the SMEs in Jiangsu Province of China of which, to our best knowledge, it has not been examined before. As China covers a relatively substantial area in the globe and since there are many provinces in the country, the results from other Chinese provinces empirical studies may not be relevant to Jiangsu province in particular. There are 200 SMEs being selected, by using the proportionate stratified sampling method, out of 893,557 SMEs [National Bureau of Statistics of China (NSBC, 2011)] among different industries in the stated province for this study.

In addition, this study is specifically considering the impact of firm size, profitability and asset tangibility, on the level of leverage of SME firms in year 2011. The variables are being operationalized as follows:

- Firm size: Total assets
- Firm profitability: Net profit
- Asset tangibility: Ratio of fixed assets to total assets
- Leverage: Ratio of debt to equity

Data is analysed by using Multiple Regression Analysis method. All assumptions have been examined prior to the performance of the analysis.

4. Results and Discussions

In the year of 2011, more than 20% of the SMEs in Jiangsu province are involved in the manufacturing activities, while construction, agriculture, retailing and catering activities are respectively contributed by less than 15% of the total SME firms. This chart indicates that the industry structure is well diversified in Jiangsu province (see Figure 1 below).

Industry Sectors

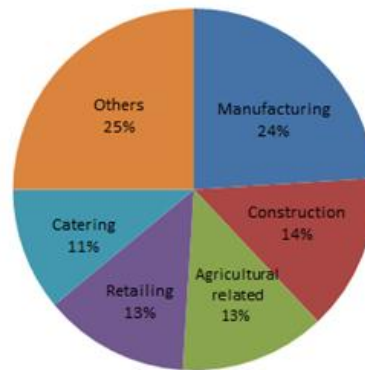


Fig. 1: SMEs and industry sectors

The results from the multiple regression analysis are as follows:

Table 1: Results from Multiple Regression Analysis

<i>Dependent variable</i> Leverage Ratio	
<i>Independent variables</i>	
Firm Size	0.466**
Firm Asset Tangibility	0.286**
Firm profitability	0.025

** $p < 0.01$

Results of this study indicate that size of the firm has a positive relationship with the leverage ratio which is consistent with prior studies Bhabra et al., 2008; Cassar and Holmes (2003); Huang and Song, 2006; Johnsen and McMahon, 2005; Qian et al., 2009; Romano et al., 2000). This result indicates that larger SMEs firms are associated with higher leverage as compared to the smaller firms. Positive association is observed between the asset tangibility and the leverage ratio, which is consistent with findings of Bhabra et al. (2008); Cassar and Holmes (2003); Chen (2004); Huang and Song (2006); Johnsen and McMahon (2005); Qian et al. (2009). As such, it can be concluded that firms that maintain a larger proportion of fixed assets to their total assets could access to larger debt funds than others. On the other hand, the findings reveal that profitability has no relationship with the leverage ratio. The results of this study conform to prior study of Ooi (1999) which indicates that leverage does not depends on the firm profitability level.

5. Conclusions

This study provides insights on firm specific characteristics as the determinants of capital structure of Chinese SMEs, particularly in Jiangsu province. The results indicate that it would be easier to obtain debt financing source for a larger firm or firm with more tangible assets resources. This phenomenon is probably true as the lender could minimize its credit risk when debts are granted to a firm that has more resources especially resources that could be used as collateral for the debts.

It is important for the SMEs to understand and act on the elements that are important in boosting its accessibility to debt funds. As such, in order for the SMEs to easily get access into debt financing, it's essential for the firms to maintain tangible resources in preference to the intangible assets. One of the reasons for such phenomenon is that it's easier to attach market value on the tangible assets as compared to the intangible assets. As a result, it would be easier for the lender to realize the collateral assets in the event of loan default by the borrower.

This study only takes into account some firm specific characteristics such as size, asset tangibility and profitability as determinants of leverage ratio of SMEs. There are other determinants that could be explored

by future researchers in determining the SMEs level of leverage, particularly in Jiangsu province. In addition, as this study is a cross-sectional study, the results would be more robust if a longitudinal study is applied.

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