



The influence of managerial factors on the capital structure of small and medium-sized enterprises in emerging economies

Evidence from China

Daniel Borgia and Alexander Newman
University of Nottingham, Ningbo, China

Abstract

Purpose – The purpose of this paper is to explore the importance of owner/manager characteristics in explaining the capital structure decisions of entrepreneurial enterprises in emerging economies using a sample of Chinese small and medium-sized enterprises (SMEs). Although mainstream theories from the finance literature are useful in explaining capital structure decisions for large firms in developed economies, they do not adequately explain the financing behaviour of SMEs in developing economies.

Design/methodology/approach – The authors' mixed methods approach utilized both quantitative and qualitative methods to understand how managerial factors influence the capital structure of Chinese SMEs.

Findings – The findings suggest that the capital structure of SMEs in China is primarily influenced by aversion to external control and propensity to take risk. It was also found that owners with better networking ties generally require less debt financing because they can access adequate external resources through informal channels.

Research limitations/implications – The main limitation concerns the extent to which the paper's findings can be generalised to outside of the specific location in which the research was undertaken. Future research might be extended to other emerging economies to determine whether the findings of this research are unique to China or robust across emerging economies, given different institutional contexts.

Practical implications – Given the critical importance of fostering growth of private enterprise in China, policy makers should be aware of how the attitudes of owner/managers impact on the development of SMEs when developing mechanisms to support them.

Social implications – Citizens in economies which provide sufficient financing and support to entrepreneurial enterprises generally enjoy a higher standard of living than societies which do not.

Originality/value – This paper fulfils an identified need for studying how entrepreneurial firms in emerging economies make the financing decisions necessary to expand and grow.

Keywords China, Entrepreneurialism, Small to medium-sized enterprises, Chinese entrepreneurship, Emerging economies, Management strategy, Networking

Paper type Research paper



Introduction

The origin of traditional financial theories of capital structure can be traced to the seminal papers of Modigliani and Miller (1958, 1963), who demonstrated that under perfect market conditions, how firms finance themselves or what we call capital structure, has not influence on firm value. Subsequent financial theories of capital structure were developed

after Modigliani and Miller's pioneering work. Among the most important of these finance theories include the static trade-off theory (Kraus and Litzberger, 1973; Kim, 1978) and the pecking-order theory (POT) (Myers and Majluf, 1984; Myers, 1984). It is important to note, however, that these and other financial theories of capital structure were developed within the context of large corporations in developed economies. Such firms are characterized by professional management who work on the behalf of many widely dispersed owners. Because of widely dispersed ownership and the separation of ownership and management, an important assumption underlying traditional financial theories of capital structure that has persisted over time is that shareholder characteristics have no bearing on capital structure decisions. For small and medium-sized enterprises (SMEs) in emerging economies this presumption does not hold; empirical tests of these theories for SMEs in emerging economies suggest that these theories do poorly in explaining capital structure decisions and financing behaviour. As a result, alternative "managerial" theories of capital structure have been forwarded to help explain the influence of owner/manager characteristics and decision making on the capital structure decisions these firms make (Barton and Gordon, 1987a, b; Barton and Matthews, 1989; McMahon *et al.*, 1993; Hackbarth, 2008; Ang *et al.*, 2010; Ruan *et al.*, 2011).

SMEs are the drivers of economic activity in both mature and emerging economies (Fritsch and Mueller, 2004; Storey, 1994). The important role played by private SMEs emerging economies, particularly in the transformation of China's economy during the last 20 years, has attracted the attention of many scholars (Anderson *et al.*, 2003; Chen, 2006; Chen and Feng, 2000; Dougherty and Herd, 2005). Recent statistics suggest that SMEs are responsible for about 75 percent of China's employment and 55 percent of its growth in economic activity (Dougherty and Herd, 2005). Given the importance of China's private SMEs, understanding how they are financed is a topic worthy of investigation.

How firms are capitalized is important to their creation and ensuing operation. Enterprises that have better access to financing generally grow larger and endure longer (Au and Kwan, 2009; Pissarides, 1999; Wiklund and Shepherd, 2003). A significant body of evidence indicates that restricted access to capital is the chief reason for the failure of SMEs (Coleman, 2000; Gaskill and Van Auken, 1993; Van Auken and Neeley, 1996). This is particularly salient for firms in emerging economies such as China, given that they face enormous challenges in securing external sources of finance (Gregory *et al.*, 2000).

Although numerous studies have examined the determinants of the capital structures of larger firms in emerging economies (Chen, 2004; Chen and Strange, 2005; Huang and Song, 2006; Nivorozhkin, 2003), fewer have investigated the determinants of capital structure of emerging economy SMEs (Nguyen and Ramachandran, 2006; Abor and Biekpe, 2009; Newman *et al.*, 2011). Within a Chinese context, recent work by Newman *et al.* (2011) indicates that traditional financing theories forwarded to explain the financing decisions of firms in developed economies do not fully explain the financing behaviour of SMEs in emerging economies such as China, given an institutional environment in which they have limited access to formal sources of finance. Underdeveloped market institutions serve to heighten the level of asymmetric information between the firms and external financiers and impact on the psychology of the owner/manager, making them more averse to risk and external control (Young *et al.*, 2008). As a result lack of access and managerial characteristics and attitudes are likely to have more of an influence on capital structure decisions in emerging economies such as China, than is the case in developed economies

where there is greater access to formal sources of finance and lower levels of asymmetric information between firms and external financiers.

Building on previous work by Van Auken (2005), we empirically test a theoretical model which examines managerial characteristics and attitudes of Chinese SME owner/managers as the main drivers of their capital structure decisions. In doing so, we augment traditional financial theories of capital structure by examining the extent to which managerial characteristics and attitudes influence a firm's willingness and ability to borrow externally by reducing information asymmetries with potential lenders.

Capital structure and SMEs

As discussed, capital structure refers to the mixture of debt and equity used to finance the business activities of a firm. Two of the most researched theories from the finance literature developed to explain the capital structures that firms adopt include the static trade-off theory (Kraus and Litzenberger, 1973; Kim, 1978) and the POT (Myers and Majiluf, 1984; Myers, 1984). The static trade-off theory developed as an explanation of capital structure based upon distortions caused by taxation and the possibility of discontinuity caused by bankruptcy (Kim, 1978). It argues for the existence of an optimal capital structure that results when managers act to minimize the costs of prevailing market imperfections, including the tax shield benefits of debt finance and the agency and financial distress costs of maintaining high debt levels (Harris and Raviv, 1990).

Although empirical evidence suggests that the static trade-off theory provides a reasonable explanation for the financing behavior of large public firms in developed economies (Jalilvand and Harris, 1984; Marsh, 1982; Taggart, 1977), there is weak support for its applicability to SMEs both in mature and emerging economies such as China (Klapper *et al.*, 2006; Newman *et al.*, 2011; Norton, 1991). This generally results because SMEs face significant obstacles in accessing external capital including debt, which limits the ability of smaller and younger firms to trade-off the benefits and costs of debt. On the basis of this evidence it seems unlikely that the static trade-off theory could sufficiently explain the capital structure decisions of Chinese entrepreneurs.

The POT (Myers, 1984) employs elements of asymmetric information and signalling theories to argue that capital structure decisions are based on distortions caused by asymmetric information between firms and potential lenders. Under the POT firms will prefer to use internal finance first because it is not subject to asymmetric information problems and is, as a result, less expensive than new debt or equity. Once internal sources have been exhausted, capital hungry firms will next issue debt, which is comparatively less expensive than new equity, both because of the tax deductibility of interest and because of fewer information asymmetries between bondholders and shareholders. Only as a last option will firms issue expensive new equity. As a result, the POT argues that there is no optimal capital structure that maximises the value of a firm (Myers, 1984).

In contrast to the STOT, several authors have argued that the POT might better explain SMEs financing behaviour in developed economies because these firms are likely to confront relatively greater information asymmetries and a higher cost of external equity (Ibbotson *et al.*, 2001). In addition, some argue that SME owner/managers generally prefer to maintain control and maintain managerial independence (Chittenden *et al.*, 1996; Jordan *et al.*, 1998) suggesting that SME owner/managers follow a financial pecking-order. Indeed, much of the empirical evidence supports the usefulness of the POT in explaining

SME financing behaviour in developed economies (Chittenden *et al.*, 1996; Michaelas *et al.*, 1999; Berggren *et al.*, 2000; Sogorb-Mira, 2005).

With respect to studies of the applicability of the POT to enterprises in emerging economies, however, the evidence is limited and mixed. Klapper *et al.* (2006) examine the capital structure determinants of Polish SMEs and find that they follow a pecking-order, initially relying on internal sources of funds before seeking bank financing and only issuing equity as a last resort. Using a dataset of 1,539 Chinese SMEs, Newman *et al.* (2011) find that while firm size and profitability were both related to leverage as posited by the POT, asset structure was not related, thus providing only partial support for the theory.

Myers' (1984) POT might not be robust in explaining Chinese and other emerging economy SME capital structure decisions for several reasons. First, because Chinese and other developing economy SMEs private enterprises have limited access to external capital including debt, most could not move up the pecking-order of financing sources as the theory predicts (Allen *et al.*, 2005; Ayyagari *et al.*, 2008). In addition, capital access constraints are exacerbated by information asymmetries between Chinese SMEs and potential lenders (Bai *et al.*, 2006). Furthermore, because of the widespread availability of informal financing, Chinese SMEs may not find formal financing from the banking sector particularly appealing (He and Cao, 2007). The high levels of aversion to external control exhibited by SME owner/managers in China might also lead to a greater reliance on internal and informal sources of financing than is the case for SMEs in other emerging economies (Newman *et al.*, 2011).

Theoretical framework and hypothesis development

An increasing number of scholars have begun to question the robustness of financial theories in explaining SME capital structure decisions emerging economies, arguing that they largely ignore the role played by owner/manager characteristics and attitudes. These qualities are likely to be important factors for SMEs because owner/managers have greater influence over financing decisions than is the case in larger firms with dispersed ownership and control (Barton and Gordon, 1987a, b; Barton and Matthews, 1989; McMahon *et al.*, 1993; Ang *et al.*, 2010).

In addition, researchers have argued that financial theories of capital structure, which were created to explain the financing behavior of firms in developed economies, might not be applicable to firms in emerging economies because of institutional and cultural differences, such as the existence of relatively weak legal and financial systems (Booth *et al.*, 2001; Demircuc-Kunt and Maksimovic, 1999; Klapper *et al.*, 2006). McMahon *et al.* (1993) argued that conventional financial theories could not adequately describe SME capital structure decisions in emerging economies because the capital market constraints faced by small firms violated many of the assumptions underlying the financial theories.

In summarizing the work of other scholars (Petty and Bygrave, 1993; Kuratko *et al.*, 1997; McMahon and Stanger, 1995), Van Auken (2005) asserts that assumptions associated with established financial theories such as shareholder wealth maximization is an oversimplification of owner objectives in a small firm context as objectives such as life-style preferences, autonomy, personal financial security, family issues, taxation and other considerations are often of equal or greater importance in making financing decisions. In addition, the weak institutional environment in emerging economies such as China leads to high levels of aversion to external control, which

reduces the willingness and ability of owner/managers to seek formal sources of external debt (Young *et al.*, 2008).

Recognizing the importance of owner/management considerations in making financing decisions, particularly within the context of SMEs, management researchers have advanced a variety of alternative theoretical frameworks based on paradigms as diverse as strategic management, psychology and sociology to explain how financing decisions in SMEs are made (Barton and Matthews, 1989; Matthews *et al.*, 1994; Romano *et al.*, 2000; Ruan *et al.*, 2011; Ang *et al.*, 2010; Hackbarth, 2008). In general, however, this collection of alternative management-based theories lacked an overarching theoretical framework until Van Auken's (2005) introduction of a model describing the dynamics of small firm capital acquisition decisions, which identified the primary factors influencing capital acquisition decisions as being based on managerial characteristics and attitudes. This model includes a number of managerial factors which may influence capital structure decisions such as experience, preference for risk, growth intentions and relationships (networking).

In this paper, using Van Auken's dynamic model as an overarching framework, we integrate previous theoretical and empirical work on managerial characteristics and attitudes to propose and test a new theoretical model (Figure 1). Using Van Auken's (2005) structure, we identify owner/manager influences on capital structure as consisting of managerial characteristics (managerial network ties, education and experience) and attitudes (managerial aversion to external control, risk-taking propensity and growth intentions). Within this framework, we control for the firm-level characteristics of size, age, profitability, asset structure and the age of the owner/manager as proposed by traditional financing theories, to determine the extent to which managerial factors influence the capital structure of SMEs, above and beyond firm-level characteristics.

Hypothesis development

Managerial attitudes.

Aversion to external control. The aversion to external control of senior decision makers has been cited as an important influence on the capital structures SME adopt (Barton and Matthews, 1989; Berggren *et al.*, 2000; Matthews *et al.*, 1994). Empirical research conducted on SMEs in Western economies reveals that some owner/managers

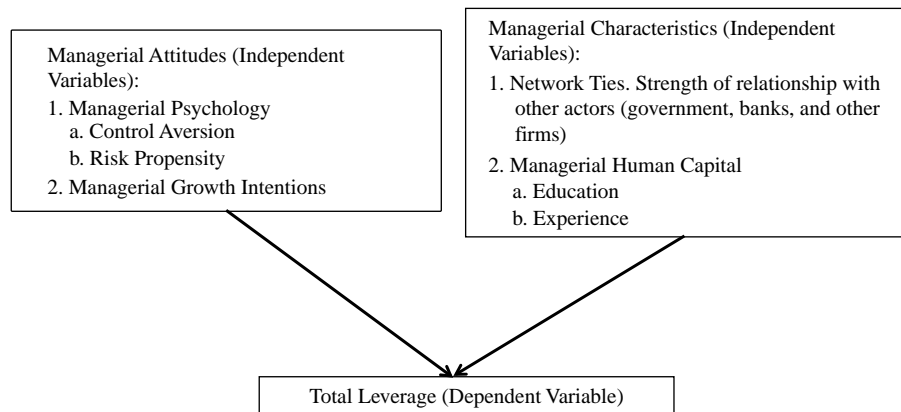


Figure 1.
Capital structure determinants of Chinese of SMEs: analytical framework

prefer to rely on internal sources of funds, fearing that reliance on external sources might lead to a loss of control over the firm and limit the power of owners to make decisions independently of their financiers (Berger and Udell, 1998; Harvey and Evans, 1995; Hutchinson, 1995). In China and many other emerging economies, a weak institutional environment heightens agency problems and leads to greater distrust between owner/managers and external providers of capital (Young *et al.*, 2008). This means that SMEs in these countries are typically more reluctant to seek external debt than would be the case in developed market economies with stricter accounting standards and rules on corporate governance. Indeed, previous research indicates that SMEs in China are generally reluctant to seek external financing due to the distrust of those outside their immediate family and social network (Pukthuanthong and Walker, 2007). This leads to the following hypothesis:

H1. The aversion to external control of the owner/manager is negatively related to leverage.

Managerial risk-taking propensity. Although the risk-taking propensity of Chinese individuals has been found to be a major factor that influences their motivation to engage in entrepreneurial activity (Tan, 2001), there has been limited work investigating how this influences the strategic orientation of Chinese SMEs, including how they are financed. Barton and Matthews (1989) and Matthews *et al.* (1994) propose that the risk-taking propensity of SME owner/managers will influence the amount of debt they are willing to assume. They argue that in cases where the owner/manager pledges personal assets as security when they borrow from banks, their risk-taking propensity strongly influences the amount of debt the business is willing to take on. Risk-taking propensity might be expected to have an even greater impact on the financing choices of SMEs in emerging economies due to the weak institutional environment present in these countries. This leads to the following hypothesis:

H2. The risk-taking propensity of the owner/manager is positively related to leverage.

Managerial growth intentions. Barton and Gordon (1987a, b) argue that the business-growth intentions of owner/managers are a principal determinant of a firm's decision to seek outside debt financing. As SMEs have comparatively fewer shareholders, the individual goals of owner/managers should have a greater influence over capital structure decision making than in larger firms (Barton and Matthews, 1989; Romano *et al.*, 2000). However, there has been limited examination of the impact of managerial growth intentions of owner/managers on the capital structure of firms in an emerging economy context. While previous research on SMEs in emerging economies demonstrates that actual firm growth is a determinant of leverage (Nguyen and Ramachandran, 2006), recent work on larger listed firms in China finds no evidence of a relationship between actual growth and leverage (Chen, 2004; Chen and Strange, 2005). Although only one study has examined how growth intentions may influence the capital structure of SMEs in developed market economies (Cassar, 2004), little is known about the influence of growth intentions on financing decisions in an emerging economy context. In line with Cassar's findings we might expect firms with growth intentions to seek financing from external sources. However, this is unclear given the propensity of Chinese firms to use alternative sources of finance, which may not always appear on the balance sheet, to finance growth (Newman *et al.*, 2011). In order to establish whether or

not growth intentions influence the use of external financing we therefore develop the following hypothesis:

- H3. The growth intentions of the owner/manager are positively related to leverage.

Managerial characteristics.

Managerial network ties. The development of and importance of networking and building network ties is enhanced in emerging economies which are characterized by institutional environments. During the last decade a number of research studies have focused on the relationship between network ties and the financing decisions of SMEs in emerging economies (Xiao, 2011; Nguyen and Ramachandran, 2006; Le and Nguyen, 2009). Their findings generally indicate that the network ties owner/managers possess with executives at other firms and with financiers are an important determinant of capital structure. For example, Nguyen and Ramachandran (2006) find that building close inter-firm and bank/firm relationships enables SMEs to get preferential access to credit over their competitors leading them to employ more debt in their capital structure and Le and Nguyen (2009) find that networking with customers and government officials promotes the use of bank financing in their capital structure. In China where the government continues to maintain significant control over the banking sector (Brandt and Zhu, 2007), we expect that firms with stronger network ties have better access to external sources of debt financing. Network ties should enable a SME to spread knowledge about the firm informally, providing information about its reliability and creditworthiness and reduce the high levels of asymmetric information that exist between the firm and its financiers in the context of emerging economies. In a recent study surveying the financing of high-tech SMEs at different stages of development in China, Xiao (2011) found that informal financial sources (from individuals and employees) were critical and that such informal sources have become a central aspect of the financial infrastructure for the private sector in China. This leads us to the following hypothesis:

- H4. The stronger the network ties of the SME owner/manager the higher the leverage in their capital structure.

Managerial educational level. Theoretically the educational achievements of the owner/manager should provide lenders with a signal as to the quality of the enterprises' human capital and improve their ability to access external financing. Nevertheless, empirical studies have not produced consistent results (Bates, 1990; Bell and Vos, 2009; Coleman and Cohn, 2000; Cassar, 2004; Scherr *et al.*, 1993; Zhang, 2008). Bates (1990) and Coleman and Cohn (2000) find that SMEs whose owner/managers are more educated have more debt in their capital structure than their less educated counterparts. However, empirical work by Scherr and Hulburt (2001), Cassar (2004) and Bell and Vos (2009) shows conflicting evidence. Both Scherr *et al.* (2003) and Bell and Vos (2009) find a strong negative relationship between the education level of the owner/manager and use of external debt financing. Bell and Vos (2009) argue that this may result from the fact that more educated owner/managers are more financially content and show greater understanding of what is valuable to them in the long-term. Such individuals gain higher utility from financial freedom and are more risk averse when making decisions. In contrast, Cassar (2004) finds no evidence of a relationship between the educational level of the SME owner/manager and use of bank financing. Recent empirical work on

Chinese SMEs by Zhang (2008) reveals that firms whose owner/managers are more highly educated are more likely to rely on formal debt financing. This may result from the fact that in emerging economies such as China, relatively high levels of asymmetric information exists between the owner/managers and potential lenders, so the educational background of the owner/manager might provide a signal to outside investors about the quality of the firm's human capital and impact on the lender's willingness to forward credit. This leads us to the following hypothesis:

H5. The educational level of the owner/manager is positively related to leverage.

Managerial experience. As with education, the experience of the owner/manager should in theory provide lenders with a signal as to the quality of the firm's human capital and improve access to external financing. Nevertheless, previous research reveals little relationship or a negative relationship between the managerial experience and firm leverage in developed economies (Scherr *et al.*, 1993; Coleman and Cohn, 2000; Cassar, 2004). For example, Scherr *et al.* (1993) find evidence of a negative relationship between the entrepreneur's managerial experience and use of external debt and Coleman and Cohn (2000) find no evidence of a relationship between years of managerial experience and external debt. Cassar (2004) demonstrates a negative although not strongly significant relationship between years of experience and leverage. He suggests these findings might be explained by the fact that owner/managers with greater experience tend to be more risk and control averse than owner/managers with less experience. These results may also be explained by the fact that owner/managers with a strong managerial background may be able to conduct business with less financial capital than their less experienced counterparts, due to their knowledge and expertise (Chandler and Hanks, 1998).

In contrast to the results of empirical work in mature economies, recent work on Chinese SMEs by Zhang (2008) finds that SMEs run by owner/managers with prior business experience before establishing their own business are more likely to rely on formal financing mechanisms than those who have not. As was the case with the owner/manager's educational background, the human capital inherent in the owner/manager's prior experience plays a more important role in reducing the asymmetric information between the firm and external investors in emerging economies than is the case in developed economies. This leads us to the following hypothesis:

H6. The managerial experience of the owner/manager is positively related to leverage.

Data and methods

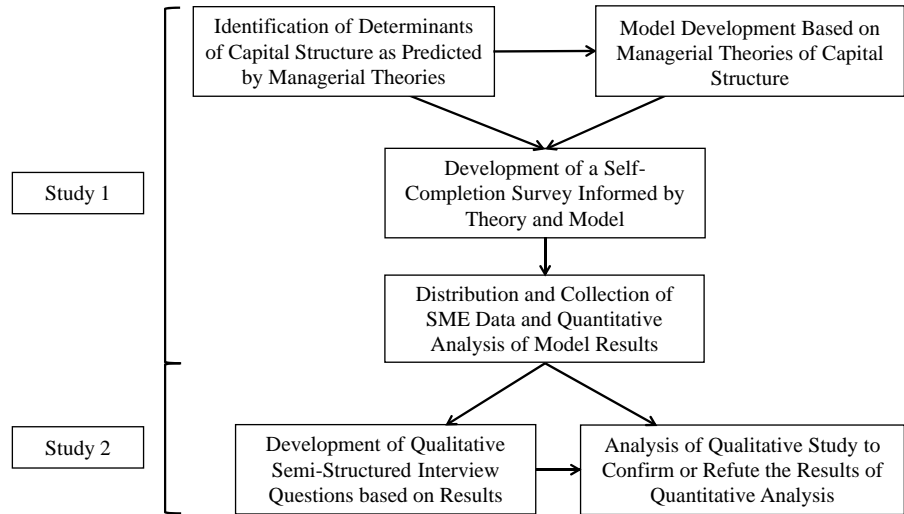
Our methodological approach utilized both quantitative and qualitative data to obtain an in-depth understanding about how managerial factors influence the capital structure of Chinese SMEs. The research design is shown in Figure 2. In the following sections the data and methods for both phases of the empirical research are presented.

Study 1: quantitative data and methods

Study 1 employed quantitative methods in the form of a survey questionnaire to examine the influence of managerial factors on the capital structure of Chinese SMEs.

The sample. As response rates to postal surveys are typically very low in China, the research team relied on the Chinese practice of using intermediaries who were members of local business associations. During the first half of 2009 they provided initial

Figure 2.
Research design



introductions to 300 private enterprises in two areas of Zhejiang Province, located on the East Coast of China. The sampled firms were chosen randomly from lists of registered enterprises in both areas held by the local SME bureaus. All sample firms to whom the survey questionnaires were distributed met the Chinese Government definition of SMEs as provided in Table I. Chinese enterprises may be classified as an SME in three ways: by the number of employees, by annual revenue and by total assets. If an enterprise meets one of the three criteria, it will be classified as an SME. One rather unique feature of Chinese SMEs is that they may possess a greater number of employees compared to elsewhere globally. This is hardly surprising though, given the country’s large population and the labour-intensive nature of the SME sector in China.

Questionnaires were distributed to the CEO of each enterprise, asking them to complete the questionnaires in consultation with the firm’s CFO. Before distributing the questionnaire, the original version in English was translated into Chinese by a research assistant bilingual in English and Chinese using the back translation procedure recommended by Brislin (1993). The survey was pilot tested on five respondents prior to general distribution to determine its face validity, clarity and readability.

A total of 214 questionnaires were returned to the research team. Out of these 60 were discarded due to incomplete responses for our key study variables, leaving 154 completed questionnaires and a response rate of 51.3 per cent. This rate is high in

| Industry | Number of employees | Annual revenue (RMB, in millions) | Total assets (RMB, in millions) |
|--------------------------|---------------------|-----------------------------------|---------------------------------|
| Manufacturing | 2,000 | 300 | 400 |
| Construction | 3,000 | 300 | 400 |
| Transportation/logistics | 3,000 | 300 | N/A |
| Hospitality | 800 | 150 | N/A |

Table I.
Methods of classification of Chinese SMEs

Source: Authors’ own creation using data from China State Statistics Bureau

comparison to postal surveys where response rates of less than 10 per cent are common (Curran and Blackburn, 2001). This high response rate was obtained by building trust with the owner/managers through the intermediary and through the promise of confidentiality. However, only 95 of the respondents were willing to provide data on two control variables, profitability and asset structure. In order to address the possibility of non or partial-response bias, a series of χ^2 and *t*-tests were undertaken to establish whether differences existed between respondents, partial respondents and non-respondents on several key variables obtained from the SME bureau. These tests revealed no significant differences, indicating our sample was representative of the general population.

Dependent variable. The dependent variable total leverage (*TL*) was measured as total debt divided by total assets. Respondents were asked to provide figures for the most recent financial year.

Independent variables. As shown in Figure 1, three variables were used to measure managerial attitudes: aversion to external control (*AEC*) was measured using one item “we intend to retain a majority stake in the business for the founders”, risk propensity (*RP*) was measured using one item “when doing business it is important to take risks” and managerial growth intentions (*GI*) were measured using one item “One of our major objectives is to increase market share as quickly as possible”. Respondents were asked to indicate the extent to which they agreed with all items on a five-point Likert scale where 1 – strongly disagree and 5 – strongly agree. As for managerial characteristics, managerial network ties (*NET*) were measured using three items taken from Wu and Leung (2005). These items assess the strength of the CEO’s network ties with other firms, government and financial institutions. The items were “we have many close relationships with other firms”, “we have very good business relationships with local government officers” and “we have very good business relationships with banks”. CEOs were asked to indicate the extent to which they agreed with each of the items on five-point Likert scales where 1 – strongly disagree and 5 – strongly agree. Exploratory factor analysis was conducted on the three item scale. The scale had a composite reliability estimate (Cronbach’s α) of 0.741, which is greater than 0.7, the threshold commonly used for reliability (Fornell and Larcker, 1981). Managerial experience (*EXP*) and educational background (*EDU*) were measured using proxies taken from previous work (Bates, 1990; Cassar, 2004; Coleman and Cohn, 2000; Scherr *et al.*, 1994). The experience of the owner/manager (*EXP*) was measured using a continuous variable measuring the number of years of managerial experience in the same industry before becoming an entrepreneur. The educational level of the owner/manager (*EDU*) was measured by a dummy variable: university educated CEOs were coded 1, those who had not graduated from university were coded 0.

Control variables. Six variables were controlled for in line with previous research. The size of the firm (*SIZE*) was measured as the log of total revenue (Titman and Wessels, 1988) in natural logarithm to control for any possible heteroscedasticity and ensure linearity in the data. The age of the firm (*AGE*) was given as age in years at the end of the last financial year (Michaelas *et al.*, 1999). A dummy variable (*INC*) was utilised to measure incorporation of the firm. It took a value of 0 for a sole proprietorship and value of 1 for a private limited liability corporation. Owner/manager age (*MANAGE*) was measured as age in years (Bell and Vos, 2009; Romano *et al.*, 2000; Scherr *et al.*, 1994). Profitability (*PROF*) was taken as return on assets before interest (Cassar and Holmes, 2003; Johnsen and McMahon, 2005; Michaelas *et al.*, 1999). Asset structure (*AS*)

was measured as the ratio of fixed assets to total assets (Johnsen and McMahon, 2005; Nguyen and Ramachandran, 2006).

Study 2: qualitative data and methods

Study 2 consisted of collecting qualitative data using semi-structured interviews and was designed to provide a more complete understanding of the findings from study 1. Based on the main results of study 1, a semi-structured interview script was developed to serve as a general guide to the areas to be covered during the interview. Before beginning the interviews, the script was translated into Chinese by a colleague bilingual in English and Chinese. A pilot study was then conducted to determine the face and content validity of the initial set of questions.

The sample. Interview participants were selected randomly from the same dataset of enterprises used in study 1. In doing this the dataset was broken down by industry and the sample was randomly chosen according to the industrial breakdown of the total population in the dataset. After interview participants had been selected, intermediaries were used to request and schedule interviews. This was done to assure the respondents that replies would be voluntary and kept confidential. All interviewees were either the chief executive officer (CEO), chief operating officer (COO) or chief financial officer (CFO) of the enterprises.

On average the interviews lasted for about 45 minutes. They took place in June-July of 2009 at the head offices of each firm. In total, 24 interviews were conducted. At this stage, it was felt that additional interviews would not provide additional insights into how SMEs are financed. To obtain alternative viewpoints, a bank manager and government official were also interviewed. The bank manager had many years of dealing with issues regarding SME financing and the government official was head of the economic bureau charged with supporting the development of SMEs in one of the two areas. Table II provides data on the participant firms and organizations and the job titles of the respondents.

An interpreter was used during the interview process because very few of the interviewees were fluent in English. Prior to interview the interpreter was made aware of the major business terminologies that may be used in the interview. The interpreter's role was to translate the research questions into Chinese and to translate the answers provided by respondents into English. The translations were checked by a second bilingual research assistant to ensure the translation was of high quality.

Analysis and results

Study 1: quantitative analysis

Table III reports the means, standard deviations and correlations for all continuous variables included in the study.

The SMEs in the sample averaged around 21.1 million RMB in annual revenue and had been in business for an average of 8.3 years. Only 26.5 percent of the enterprises in the survey were sole proprietorships and 73.5 percent private limited liability enterprises. They had an average debt-to-assets ratio of around 46 percent which was slightly lower than that reported for Chinese firms in previous studies in the early-to-mid 2000s (Li *et al.*, 2009; Newman *et al.*, 2011). As for the demographic profile of the respondents, they were on average 44 years of age and had around 11 years of managerial experience before becoming CEO of their present business. Around 43 percent of them were university educated.

| Firm/ respondent | Industry | Position of respondent | No. of employees | Sales turnover (RMB, in millions) |
|---------------------|--|---|---------------------|--------------------------------------|
| A | Medical products (retailer/wholesaler) | CFO | 300 | 500 |
| B | Gas supply (retailer) | CEO | 56 | 100 |
| C | Construction | CFO | 60 | 400 |
| D | Information technology services | CEO | 15 | 15 |
| E | Construction materials (manufacturer) | CEO | 200 | 60 |
| F | Electric fan (manufacturer) | CEO | 760 | N/A |
| G | Machine (manufacturer) | CEO | N/A | N/A |
| H | Real estate | CEO | N/A | N/A |
| I | Textile (manufacturer) | CEO | 700 | 175 |
| J | Construction materials (manufacturer) | CFO | 400 | 120 |
| K | Machine (manufacturer) | CEO | 200 | 80 |
| L | Pipe (manufacturer) | COO | 18 | 5-6 |
| M | Pipe (manufacturer) | COO | 70 | 100 |
| N | Steel structures (manufacturer) | CEO | 100 | 20 |
| O | Textile (manufacturer) | CEO | 86 | 10 |
| P | Food processing | CEO | 45 | 10 |
| Q | Textile machine (manufacturer) | CEO | 47 | 7 |
| R | Machine tools (manufacturer) | CEO | 30 | 5-6 |
| S | Steel (wholesaler) | CEO | 10 | 30 |
| T | Automobile (retailer) | CFO | 30 | 60 |
| U | Coal (retailer) | CEO and CFO | 7 | 30 |
| V | Lighting (manufacturer) | CEO | 600 | 150 |
| W | Machine (manufacturer) | CEO | 350 | 7.2 |
| X | Food processing | CEO | 200 | 60 |
| Y | Government official | Head of economic cooperation bureau | | |
| Z | Bank official | Branch manager | | |

Table II.
Information about
interview respondents

Hierarchical regression analysis was used to test our main hypotheses. Before hypothesis testing was undertaken we checked for violations of the normality assumption by examining the variance inflation factor and tolerance statistics for the study variables. This showed an inconsequential collinearity among the study variables and therefore their acceptability for inclusion in regressions (Hair *et al.*, 1998). The regression results are presented in Table IV. Two separate sets of regressions were run. In the first set of regressions (models 1 and 2) all of the control variables were entered into the regression in two steps. In the first step, the control variables were entered into the regression; in the second step, the independent variables were entered. In the second set of regressions (models 3 and 4) two control variables, profitability and asset structure were excluded from analysis due to a limited number of observations, resulting from the unwillingness of a significant number of firms to divulge this sensitive financial information. This left a reasonable sample size of 154 firms compared to the first set of regressions in which the sample size was 95 firms.

In both sets of regressions aversion to external control and risk propensity were found to influence the total leverage of sampled firms; and the results were consistent with

Table III.
Correlations between
variables

| | Mean | SD | TL | SIZE | AGE | INC | MANAGE | PROF | AS | CA | RP | GI | NET | EXP | EDU |
|--------|--------------|-------------|----------|---------|----------|----------|---------|---------|--------|---------|--------|---------|---------|-------|-------|
| TL | 0.46 | 0.34 | 1.000 | | | | | | | | | | | | |
| SIZE | 21.1 million | 4.3 million | 0.049* | 1.000 | | | | | | | | | | | |
| AGE | 8.30 | 6.30 | 0.197* | 0.064 | 1.000 | | | | | | | | | | |
| INC | 0.74 | 0.44 | 0.424** | 0.154 | 0.350** | 1.000 | | | | | | | | | |
| MANAGE | 43.65 | 6.75 | 0.171* | 0.294** | 0.245** | 0.245** | 1.000 | | | | | | | | |
| PROF | 0.14 | 0.23 | -0.262** | 0.015 | -0.063 | -0.386** | 0.044 | 1.000 | | | | | | | |
| AS | 0.45 | 0.56 | 0.019 | -0.068 | 0.051 | -0.044 | 0.079 | 0.273** | 1.000 | | | | | | |
| AEC | 3.83 | 0.88 | -0.259** | -0.064 | -0.308** | -0.214** | -0.172* | 0.206* | 0.102 | 1.000 | | | | | |
| RP | 3.83 | 0.79 | 0.204* | -0.058 | 0.077 | 0.207** | 0.182* | 0.038 | -0.021 | 0.146 | 1.000 | | | | |
| GI | 4.26 | 0.77 | -0.205* | 0.146 | -0.282** | -0.348** | -0.109 | 0.124 | 0.016 | 0.288** | 0.020 | 1.000 | | | |
| NET | 3.74 | 0.86 | -0.390** | 0.318** | -0.235** | -0.268** | -0.045 | 0.219** | 0.212* | 0.197* | 0.025 | 0.472** | 1.000 | | |
| EXP | 11.08 | 7.56 | 0.274** | 0.210** | 0.317** | 0.329** | 0.435** | -0.080 | -0.094 | -0.181* | 0.126 | -0.147 | -0.151 | 1.000 | |
| EDU | 0.43 | 0.50 | -0.080 | 0.192* | -0.116 | 0.102 | -0.101 | -0.056 | -0.094 | -0.043 | -0.015 | 0.078 | 0.242** | 0.013 | 1.000 |

Note: Significant at *5 and **1 per cent levels, respectively

Table IV.
Regression results

| | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------|---------|------------|-----------|------------|
| <i>Control variables</i> | | | | |
| SIZE | 0.124 | 0.181 * | -0.037 | 0.117 |
| AGE | -0.066 | -0.138 | 0.042 | -0.060 |
| INC | 0.143 | 0.152 | 0.397 *** | 0.264 *** |
| MANAGE | 0.028 | -0.056 | 0.075 | -0.010 |
| PROF | -0.179 | -0.135 | | |
| AS | 0.064 | 0.232 ** | | |
| ΔR^2 | 0.094 | 0.094 | 0.188 | 0.188 |
| AEC | | -0.241 ** | | -0.177 ** |
| RP | | 0.328 *** | | 0.180 ** |
| GI | | 0.115 | | 0.086 |
| NET | | -0.363 *** | | -0.347 *** |
| EXP | | 0.239 ** | | 0.187 *** |
| EDU | | -0.047 | | -0.104 |
| ΔR^2 | | 0.114 | | 0.127 |
| <i>n</i> | 95 | 95 | 154 | 154 |
| R^2 | 0.094 | 0.314 | 0.188 | 0.363 |

Note: Significant at: *10, **5 and ***1 per cent levels, respectively

H1 and *H2*. Specifically, a negative relationship was found between aversion to external control and total leverage, which indicates that the more averse the owner/manager was to external control the more likely they were to limit the amount of debt in their capital structure. Also as hypothesized, the greater an owner/manager's risk-taking propensity, the more likely they were to employ debt in their capital structure. The data analysis provided no support for *H3* that higher growth intentions on the part of management would lead to a greater use of leverage. Surprisingly, a negative association was found between the firm's network ties and total leverage, which was contrary to *H4*. This suggests that firms with stronger relationships with other economic actors were less likely to use debt in their capital structure. Although managerial experience was found to be positively related to total leverage, in line with *H6*, no support was found for *H5*, indicating that the education levels of owner/managers did not significantly impact on the amount of debt used in their capital structure.

Of the six control variables, size (slightly) and asset structure had a positive and significant influence on leverage when data analysis was conducted on the smaller sample of firms (models 1 and 2) for which that data was available. When asset structure and profitability measures were removed to the regression in models 3 and 4, incorporated firms were found to have significantly higher levels of leverage than non-incorporated firms. No evidence was found of a significant relationship between any of the other control variables and leverage. This suggests the limited applicability of the POT which proposes a positive relationship between asset structure and leverage and size and leverage and a negative relationship between profitability and leverage (Newman *et al.*, 2011).

Study 2: qualitative analysis

The qualitative data was analyzed using coding. A thematic approach was adopted to attach codes to themes in the interview data (Ryan and Bernard, 2003). In total,

14 codes were developed and included themes such as informal financing, network ties and financing, bank/firm relationships and control aversion and financing. This enabled quick retrieval and examination of statements from across all of the interviews that referred to the same theme (Kvale, 2007).

A mixed approach to coding was adopted. First, a starting list of analytical categories (codes), based on the initial hypotheses and the results of study 1, was developed prior to conducting the interview fieldwork (Marshall and Rossman, 2006). This allowed the development of a category tree with which to analyze the interview data as it was collected and attribute codes to statements made by respondents in the interviews. Second, as the data analysis was executed, new categories of codes were developed to encompass themes that were uncovered during the process of analyzing interview transcripts (Miles and Huberman, 1994). Once a new theme had been identified in the interview data a new coding category was developed. The new coding category was then applied to the data already coded.

In the interest of efficiency, because study 2 was conducted primarily to enhance understanding of the findings of study 1, we report only excerpts of interviews that serve to enhance our understanding of the significant results reported in study 1.

Managerial attitudes: aversion to external control and risk propensity. The results of study 1 provide strong support for the idea that Chinese SMEs are reluctant to rely on external debt financing because of the desire of owner/managers to maintain independence and control over the decision making in their enterprise (Harvey and Evans, 1995; Hutchinson, 1995). In support of the findings of study 1, responses provided by a number of CEOs indicate that SME owner/managers who exhibit aversion to external control are less likely to rely on external sources of debt to finance their business activities. Typical responses included:

We don't want to attract external investors, as we want to keep absolute control in the family (RC).

We don't want external financing. We are happy with the present situation (RU).

Risk propensity also seemed to impact on the willingness of owner/managers to take on external debt as the following responses illustrate:

I don't want to take on too much debt and just want to develop steadily. I don't need too much risk (RD).

I have postponed my plans to take on external debt to fund expansion due to the present risky economic environment (RF).

Only when the company has become stronger in the market will I consider taking on external debt to fund expansion (RG).

We will not undertake unreasonable expansion and maintain a high debt-to-asset ratio. Otherwise we might risk going out of business like other companies in this area who have high debt ratios (RW).

These responses strongly support the results of Study 1 in which a manager's aversion to outside control was shown to be significantly negatively related to total leverage; and in which a manager's propensity to take risks was significantly positively related to leverage.

Managerial network ties. The literature suggests that the network ties of the SME owner/manager (with other firms, banks and government officials) may provide them with

greater ability to access external sources of financing (Nguyen and Ramachandran, 2006; Le and Nguyen, 2009). Surprisingly, in Study 1 we found that network ties were significantly, but inversely, related to the use of leverage, counter to what we hypothesized. Specifically, we found that firms which reported closer relationships with other firms, bankers and government officials, used less leverage on average. Information gleaned from our discussion with owner/managers helped us to understand why. A number of respondents highlighted the importance of relationships with other firms in securing capital through informal channels that might not be reported as debt on their balance sheets. For example, several firms revealed they had used inter-firm guarantees when they had insufficient assets to pledge as security for loans. Other respondents indicated they had borrowed money informally from other firms in their business network in times of financial difficulty:

[The relationship with other firms] is important to us. An example is the inter-firm guarantee. I will use it if we don't have enough assets as security for our debts (RN).

We can borrow from them [other firms] when our bank loan is due but we don't have the necessary capital to pay on time (RO).

We help each other. I borrow money from them [other firms] when my debts become due (RP).

One respondent highlighted in greater detail the critical role played by financing via inter-firm network loans to the survival of his business:

Occasionally for some small amounts, we will lend or borrow between enterprises [...] when we run enterprises, we work as a group of enterprises and we guarantee each others' loans. Therefore, none of us will go out of business (RI).

These statements and others indicated that informal financing via networks with other firms is an important source of financing for a significant number of the enterprises in our sample.

When asked about the importance of having good relationships with government officials in accessing external capital, several respondents indicated the support provided by government officials was crucial when applying for a loan from the bank:

You must have a good relationship with some officials in China. For example, a friend of mine who needed bank financing but had some difficulty asked for my help in introducing him to an official. In China, relationships are more important than reason and law. You can know more people through officials (RD).

At first, I asked for a loan of 50,000 RMB. At that time, they [the bank] did not know much about us and refused to lend, even though 50,000 RMB was not a large amount. Later we managed to borrow it with the guarantee of an officer in the town government (RX).

While these statements would suggest that better relationships with government officials would lead to higher debt levels through better access to borrowing, respondent X, when asked to go into detail, elaborated as follows:

Each year, the government of the city awards us 400,000 to 500,000 RMB and the government of the town awards us 70,000 to 80,000 RMB [...] The government offers strong support for our company. The total amount of awards is at least 600,000 to 700,000 RMB each year. We get money for nothing. We take it and never need to pay back (RX).

He also outlined the support national government provided SMEs during the 2008-2009 financial crisis, revealing that the national government had reduced interest rates, encouraged greater communication between private firms and banks, encouraged banks to issue more loans and asked banks to defer repayment of loans for firms in financial trouble. These statements offer insight as to why (contrary to our expectations) firms with strong network ties might report the use of less leverage – because they do not need to borrow and/or because a significant amount of informal financial support does not show up on their balance sheets.

In terms of their relationships with banks, a number of respondents indicated that strong banking relationships increased their ability to access adequate financing, with respondent W commenting as follows:

If we want to develop rapidly, by leaps and bounds, then it is definitely not sufficient to rely solely on internal sources of finance. If you want to develop, you will need the effective help of banks [. . .] [My company] is considering some issues, such as how to develop and how to establish our own original business lines. These business lines cannot be successful without the credit relationship and the comprehensive support from banks [. . .] We cannot do it without banks (RW).

Thus, it appears that owners of growth-oriented firms felt that having good relationships with banks were essential to support these aspirations. This would seem to indicate a positive relationship between network ties and leverage. Interestingly, however, a significant number of respondents forwarded the opinion that the most important criteria for the bank when deciding whether or not to lend money to a firm was the financial position of the firm and not simply whether the firm had a good relationship with bank officials. Several respondents suggested that firm reputation and repayment history were the main criteria used by banks when deciding whether or not to grant credit. When asked how their firms built a good relationship with their banks respondents forwarded the following comments:

Reputation and prompt payment of the loan are extremely important. We just need to pay our interest into the bank account when the debt becomes due, or we can pay in cash the following day. Actually, the banks trust you when they lend you money, so you do not need to do anything else to build a relationship with them (RP).

We believe the good relationship between the bank and our company is built on good reputation and creditability (RQ).

This suggests that, as in developed countries, firms with the best reputations, strongest balance sheets and business prospects would be in the best position to borrow. However, this type of firm is of the sort that would be least likely to borrow. Perhaps, then, firms with better network ties (better reputations) who are most able to borrow from banks do not need to, helping to account for the unexpected negative relationship between network ties leverage. For example, the branch manager of a state-owned bank, when asked whether a firm may find it easier to access bank financing if they have a personal relationship with bank officials, made the following comments:

Such circumstances do exist. However, the major criterion is the performance of the applicant, especially the financial performance. Companies that have personal relationships with us may enjoy priority if they measure up. But if they fail in meeting the basic requirements, I don't think that personal relationships work (RZ).

Discussion

Previous research about how SMEs make capital structure decisions suggests that important mainstream financial theories such as the static trade-off theory and POT are inadequate, particularly in an emerging economy context (Newman *et al.*, 2011). In this paper, based on an approach used by Van Auken (2005), we integrate previous theoretical and empirical work to propose and test a new theoretical model that identifies managerial characteristics and attitudes as the main drivers behind the financing behaviour of SMEs in an emerging economy context.

We find evidence to indicate that managerial characteristics and attitudes may explain differences in the capital structure between firms, above and beyond firm-level variables proposed by financial capital structure theories. In particular, the results from study 1 revealed that the use of debt by Chinese firms is strongly influenced by managerial attitudes including their aversion to external control and risk. First, we found that SME owner/managers who were more averse to external control were less likely to seek outside debt financing. This is in line with the findings from previous empirical work which reveal a negative relationship between aversion to external control and use of debt in the capital structure of SMEs (Harvey and Evans, 1995; Hutchinson, 1995; Berger and Udell, 1998). Owner/managers who fear that the use of external debt financing could lead to a loss of flexibility and control over their power to make decisions are more likely to limit the amount of debt in their firm's capital structures. In addition, the results of study 1 provided strong evidence that leverage was directly related to the risk propensity of the owner/manager. This is in line with Barton and Matthews (1989) and Matthews *et al.* (1994) who argue that the risk propensity of decision makers will have a significant influence on the debt position of the firm, especially when they provide security for the money that is being lent, in the form of personal assets (Barton and Matthews, 1989; Matthews *et al.*, 1994). Contrary to Barton and Gordon's (1987a, b) and Barton and Matthew's (1989) theoretical assertions and what was hypothesized, no relationship was found between the growth intentions of owner/managers and total leverage in the capital structure of surveyed firms. This may be because owner/managers typically use profits and alternative financing mechanisms to finance growth that do not always appear on the balance sheet (Newman *et al.*, 2011).

In contrast to the findings of previous work on SMEs in emerging countries (Nguyen and Ramachandran, 2006), a strong negative relationship was found between network ties and leverage in study 1. Given the significant constraints faced by Chinese SMEs in seeking external debt financing as highlighted in previous literature (Gregory *et al.*, 2000; Bai *et al.*, 2006), these results were initially surprising. However, the results from the interviews in study 2 shed light on several potential explanations for this finding. For example, SMEs with stronger network ties might have lower debt levels than those with weaker ties because those with stronger ties might tend to be more profitable (Peng and Luo, 2000) and as a result, would not be as likely to borrow money. Indeed, the descriptive statistics revealed that network ties were significantly positively correlated with firm profitability. When firm profitability was controlled for in the regression, the strength of the relationship between network ties and total leverage became weaker. In addition, the negative relationship between network ties and leverage could be explained by the prevalent use of informal financial resources and financial "bootstrapping" techniques by firms with stronger network ties (Carter and Van Auken, 2005; Ebben and Johnson, 2006). Bootstrapping refers to a collection of techniques used

by firms to reduce the need to seek external finance from traditional investors such as banks (Winborg and Landström, 1997). They may include delaying payments, minimizing investment, borrowing from the owner and sharing resources with other firms (Carter and Van Auken, 2005). In general, the literature suggests that firms with stronger network ties make greater use of these informal financing techniques, which often do not show up on firm balance sheets (Ebben and Johnson, 2006).

Good relationships with government officials and executives at other firms also provide SMEs with greater access to a whole host of resources, other than access to external debt financing. The results from study 2 suggested that inter-firm loan guarantees and grants by local governments enhanced access to informal sources of financing which may not be reflected as leverage on the firm's balance sheet. Other non-debt resources included preferential information regarding government policies and business opportunities, business licenses, land, access to market and distribution channels and favourable policies regarding taxation (Tsang, 1998; Fan, 2002; Tan *et al.*, 2009). All of these factors would reduce the need to borrow to support operating activities and growth.

The owner/manager's educational level was not found to significantly influence the amount of debt supplied to Chinese SMEs. This is consistent with the findings from recent work on Australian SMEs (Romano *et al.*, 2000; Cassar, 2004), but conflicts with findings from previous work in the USA (Bates, 1990; Coleman and Cohn, 2000). These findings are also contrary to recent work by Zhang (2008) on Chinese SMEs in Sichuan Province, which revealed that more highly educated owner/managers were more likely to rely on bank financing.

As hypothesized, owner/manager experience was significantly positively related to firm leverage. Data analysis revealed that firms run by owner/managers with longer experience tended to use more leverage than those with less experience. This seems to contradict the findings from previous studies which find no significant or a negative influence of managerial experience on the leverage of SMEs (Scherr *et al.*, 1993; Coleman and Cohn, 2000; Cassar, 2004). These findings suggest that in the emerging economy context lenders place greater value on the experience of owner/managers than on their educational background.

Limitations and suggestions for future research

The main limitation of this paper concerns the extent to which its findings can be generalised outside of the specific location in which it was undertaken. Future research might also be extended to other emerging economies to determine whether the findings of this research are unique to China or robust across emerging economies given different institutional contexts. In addition comparative work might be undertaken between emerging and developed economies to investigate the relative importance of firm and managerial-level determinants of capital structure in different institutional contexts. Such replication efforts could be undertaken with sufficient time, financial support and access to participants.

A second limitation is the potential bias towards successful firms in the sample. Although measures were taken to ensure the sample was representative of SMEs in Zhejiang Province, the sensitive nature of the questionnaire might have resulted in a higher response rate among more successful firms. In the future researchers should consider using more representative sampling techniques, although this has been shown to result in lower response rates within the Chinese context (Zheng *et al.*, 2006).

Third, the study was not able to account for the changing nature of a firm's financing decisions over time. It may be worthwhile to undertake longitudinal research which would enable a more in-depth explanation of how financing decisions change through different stages of a firm's development. This would enable researchers to examine whether the ability of Chinese SMEs to access adequate sources of external financing is improving or getting worse and whether financing follows a hierarchical pecking-order.

Fourth, future research might consider using alternative methods for measuring some of the independent variables such as network ties. For example, social network analysis or objective measures such as the amount of money spent on entertainment might also be used as a proxy for building and maintaining network ties. Future research might also consider the use of multiple-item scales to measure some of the constructs in the study such as aversion to external control and risk propensity. Such scales might result in stronger psychometric properties than single-item scales.

Finally, researchers might investigate how family-involvement in ownership and management influences capital structure decisions. Although the present study did not distinguish between family and non-family firms, findings from the interview data indicate that family firms are more control and risk averse and less likely to seek external sources of financing than non-family firms. This should be substantiated by future empirical research.

Conclusion and policy implications

It is clear from our results that managerial attitudes regarding aversion to external control and the propensity to take risk are the main drivers of the capital structure decisions of Chinese SMEs. Due to a weak institutional environment, owner/managers of SMEs in emerging economies such as China are typically more averse to external control than is the case in developed economies and this has a negative impact on their willingness to seek external financing. This in turn may impact on their ability to grow in size and ultimately affect their chances of survival.

Given the critical importance of fostering growth of private enterprise in China, policy makers should be aware of how the attitudes of owner/managers impact on the development of the SME sector when developing effective support mechanisms for SMEs. Instead of simply providing general measures to support the whole population of SMEs, it might be more effective for them to concentrate resources on those SMEs that need financing, but face difficulties in accessing it due to significant asymmetric information disparities between themselves and potential lenders. Support need not be designed or provided for those enterprises whose owner/managers exhibit high levels of aversion to external control and are not actively seeking external sources of financial support. In addition, policy makers should consider identifying and developing resources and techniques to support the growth of small, private firms that do not require owner/managers to relinquish control. They should also continue to strive to improve the institutional environment to encourage the greater use of formal financing mechanisms by SMEs that may involve relinquishing control.

References

- Abor, J. and Biekpe, N. (2009), "How do we explain the capital structure of SMEs in sub-Saharan Africa? Evidence from Ghana", *Journal of Economic Studies*, Vol. 36 No. 1, pp. 83-97.
- Allen, F., Qian, J. and Qian, M. (2005), "Law, finance and economic growth in China", *Journal of Financial Economics*, Vol. 77, pp. 57-116.

- Anderson, A., Li, J., Harrison, R. and Robson, P. (2003), "The increasing role of small business in the Chinese economy", *Journal of Small Business Management*, Vol. 41 No. 3, pp. 310-16.
- Ang, J.S., Cole, R.A. and Lawson, D. (2010), "The role of owner in capital structure decisions: an analysis of single-owner corporations", *The Journal of Entrepreneurial Finance*, Vol. 14 No. 3, pp. 1-36.
- Au, K. and Kwan, H. (2009), "Start-up capital and Chinese entrepreneurs: the role of family", *Entrepreneurship Theory & Practice*, Vol. 33 No. 4, pp. 889-908.
- Ayyagari, M., Demircuc-Kunt, A. and Maksimovic, V. (2008), "Formal versus informal finance: evidence from China", Working Paper No. 4665, The World Bank, Washington, DC.
- Bai, C.E., Lu, J. and Tao, Z. (2006), "Property rights protection and access to bank loans: evidence from private enterprises in China", *Economics of Transition*, Vol. 14 No. 4, pp. 611-28.
- Barton, S.L. and Gordon, P.J. (1987a), "Corporate strategy and capital structure", *Strategic Management Journal*, Vol. 96 No. 6, pp. 623-63.
- Barton, S.L. and Gordon, P.J. (1987b), "Corporate strategy: useful perspective for the study of capital structure?", *Academy of Management Review*, Vol. 12 No. 1, pp. 67-75.
- Barton, S.L. and Matthews, C.H. (1989), "Small firm financing: implications from a strategic management perspective", *Journal of Small Business Management*, Vol. 27 No. 1, pp. 1-7.
- Bates, T. (1990), "Entrepreneur human capital inputs and small business longevity", *Journal of Economics and Statistics*, Vol. 7 No. 4, pp. 551-9.
- Bell, K. and Vos, E. (2009), "SME capital structure: the dominance of demand factors", SSRN working paper.
- Berger, A.N. and Udell, G.F. (1998), "The economics of small business finance: the roles of private equity and debt markets in the financial growth cycle", *Journal of Banking & Finance*, Vol. 22 Nos 6-8, pp. 613-73.
- Berggren, B., Olofsson, C. and Silver, L. (2000), "Control aversion and the search for external financing in Swedish SMEs", *Small Business Economics*, Vol. 15, pp. 233-42.
- Booth, L., Aivazian, V., Demircuc-Kunt, A. and Maksimovic, V. (2001), "Capital structure in developing countries", *Journal of Finance*, Vol. 56 No. 1, pp. 87-130.
- Brandt, L. and Zhu, X. (2007), "The Chinese banking sector: problems and solutions", in Calomiris, C. (Ed.), *China's Financial Transition at a Crossroad*, Columbia University Press, New York, NY.
- Brislin, R. (1993), *Understanding Culture's Influence on Behaviour*, Harcourt Brace College Publishers, Fort Worth, TX.
- Carter, R.B. and Van Auken, H.E. (2005), "Bootstrap financing and owners' perceptions of their business constraints and opportunities", *Entrepreneurship & Regional Development*, Vol. 17 No. 2, pp. 129-44.
- Cassar, G. (2004), "The financing of business start-ups", *Journal of Business Venturing*, Vol. 19, pp. 261-83.
- Cassar, G. and Holmes, S. (2003), "Capital structure and financing of SMEs: Australian evidence", *Accounting and Finance*, Vol. 43, pp. 123-47.
- Chandler, G.N. and Hanks, S.H. (1998), "An examination of the substitutability of founders human and financial capital in emerging business ventures", *Journal of Business Venturing*, Vol. 13 No. 5, pp. 353-69.

- Chen, B. and Feng, Y. (2000), "Determinants of economic growth in China: private enterprise, education and openness", *China Economic Review*, Vol. 11 No. 1, pp. 1-15.
- Chen, J. (2006), "Development of Chinese small and medium-sized enterprises", *Journal of Small Business and Enterprise Development*, Vol. 13 No. 2, pp. 140-7.
- Chen, J. and Strange, R. (2005), "The determinants of capital structure: evidence from Chinese listed companies", *Economic Change and Restructuring*, Vol. 38, pp. 11-35.
- Chen, J.J. (2004), "Determinants of capital structure of Chinese listed companies", *Journal of Business Research*, Vol. 57 No. 12, pp. 1341-51.
- Chittenden, F., Hall, G. and Hutchinson, P. (1996), "Small firm growth, access to capital markets and financial structure: review of issues and an empirical investigation", *Small Business Economics*, Vol. 8, pp. 56-67.
- Coleman, S. (2000), "Access to capital and terms of credit: a comparison of men- and women-owned small businesses", *Journal of Small Business Management*, Vol. 38 No. 3, pp. 37-53.
- Coleman, S. and Cohn, R. (2000), "Small firms' use of financial leverage: evidence from the 1993 national survey of small business finances", *Journal of Business Entrepreneurship*, Vol. 12 No. 3, pp. 81-98.
- Curran, J. and Blackburn, R.A. (2001), *Researching the Smaller Enterprise*, Sage, London.
- Demircuc-Kunt, A. and Maksimovic, V. (1999), "Institutions, financial markets and firm debt-maturity", *Journal of Financial Economics*, Vol. 54, pp. 295-336.
- Dougherty, S. and Herd, R. (2005), *Fast-falling Barriers and Growing Concentration: The Emergence of a Private Economy in China*, Organisation for Economic Co-Operation and Development, Paris.
- Ebben, J. and Johnson, A. (2006), "Bootstrapping in small firms: an empirical analysis of change over time", *Journal of Business Venturing*, Vol. 21 No. 6, pp. 851-65.
- Fan, Y. (2002), "Guanxi consequences: personal gains at social cost", *Journal of Business Ethics*, Vol. 38 No. 4, pp. 371-80.
- Fornell, C. and Larcker, D.F. (1981), "Structural equation models with unobservable variables and measurement error: algebra and statistics", *Journal of Marketing Research*, Vol. 18 No. 3, pp. 382-8.
- Fritsch, M. and Mueller, P. (2004), "The effects of new business formation on regional development over time", *Regional Studies*, Vol. 38 No. 8, pp. 961-75.
- Gaskill, L.R. and Van Auken, H.E. (1993), "A factor analytic study of the perceived causes of small business failure", *Journal of Small Business Management*, Vol. 31 No. 4, pp. 18-32.
- Gregory, N., Tenev, S. and Wagle, D. (2000), *China's Emerging Private Enterprises: Prospects for the New Century*, International Finance Corporation, Washington, DC.
- Hackbarth, D. (2008), "Managerial traits and capital structure decisions", *Journal of Financial and Quantitative Analysis*, Vol. 43 No. 4, pp. 843-82.
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, Prentice-Hall, Upper Saddle River, NJ.
- Harris, M. and Raviv, A. (1990), "Capital structure and the informational role of debt", *Journal of Finance*, Vol. 45 No. 2, pp. 321-49.
- Harvey, M. and Evans, R. (1995), "Forgotten sources of capital for the family-owned business", *Family Business Review*, Vol. 8 No. 3, pp. 159-75.

- He, X. and Cao, Y. (2007), "Understanding high saving rate in China", *China and the World Economy*, Vol. 15 No. 1, pp. 1-13.
- Huang, G. and Song, F.M. (2006), "The determinants of capital structure: evidence from China", *China Economic Review*, Vol. 17, pp. 14-36.
- Hutchinson, R.W. (1995), "The capital structure and investment decision of the small owner-managed firm: some exploratory issues", *Small Business Economics*, Vol. 7, pp. 231-9.
- Ibbotson, R., Sindelar, J. and Ritter, J. (2001), "Initial public offerings", in Reynolds, D.H. (Ed.), *The New Corporate Finance: Where Theory Meets Practice*, 3rd ed., McGraw-Hill, New York, NY.
- Jalilvand, A. and Harris, R.S. (1984), "Corporate behavior in adjusting to capital structure and dividend targets: an econometric study", *Journal of Finance*, Vol. 39 No. 1, pp. 127-45.
- Johnsen, P.C. and McMahon, R.G.P. (2005), "Cross-industry differences in SME financing behavior: an Australian perspective", *Journal of Small Business and Enterprise Development*, Vol. 12 No. 2, pp. 160-77.
- Jordan, J., Lowe, J. and Taylor, P. (1998), "Strategy and financial policy in UK small firms", *Journal of Business Finance & Accounting*, Vol. 25, pp. 1-27.
- Kim, E.H. (1978), "A mean-variance theory of optimal capital structure and corporate debt capacity", *Journal of Finance*, Vol. 33 No. 1, pp. 45-63.
- Klapper, L.F., Sarria-Allende, V. and Zaidi, R. (2006), "Firm-level analysis of small and medium size enterprise financing in Poland", World Bank Policy Research Working Paper 3984, The World Bank, Washington, DC.
- Kraus, A. and Litzenberger, R. (1973), "A state-preference model of optimal financial leverage", *Journal of Finance*, Vol. 28 No. 4, pp. 911-22.
- Kuratko, D.F., Hornsby, J.S. and Naffziger, D.W. (1997), "An examination of owner's goals in sustaining entrepreneurship", *Journal of Small Business Management*, Vol. 35 No. 1, pp. 24-34.
- Kvale, S. (2007), *Doing Interviews*, Sage, London.
- Le, N.T.B. and Nguyen, T.V. (2009), "The impact of networking on bank financing: the case of small and medium-sized enterprises in Vietnam", *Entrepreneurship, Theory and Practice*, Vol. 33 No. 4, pp. 867-87.
- Li, K., Yue, H. and Zhao, L. (2009), "Ownership, institutions and capital structure: evidence from China", *Journal of Comparative Economics*, Vol. 37, pp. 471-90.
- McMahon, R. and Stanger, A. (1995), "Understanding the small enterprise financial objective function", *Entrepreneurship: Theory and Practice*, Vol. 19, pp. 21-39.
- McMahon, R., Holmes, S., Hutchinson, P. and Forsaith, D. (1993), *Small Enterprise Financial Management – Theory and Practice*, Harcourt Brace & Company, Orlando, FL.
- Marsh, P. (1982), "The choice between equity and debt: an empirical study", *Journal of Finance*, Vol. 37 No. 1, pp. 121-44.
- Marshall, C. and Rossman, G.B. (2006), *Designing Qualitative Research*, Sage, London.
- Matthews, C.H., Vasudevan, D.P., Barton, S.L. and Apana, R. (1994), "Capital structure decision-making in privately-held firms: beyond the finance paradigm", *Family Business Review*, Vol. 7 No. 4, pp. 349-67.

- Michaelas, N., Chittenden, F. and Poutziouris, P. (1999), "Financial policy and capital structure choice in UK SMEs: empirical evidence from company panel data", *Small Business Economics*, Vol. 12 No. 2, pp. 113-30.
- Miles, M. and Huberman, A. (1994), *Qualitative Data Analysis: An Expanded Sourcebook*, Sage, London.
- Modigliani, F. and Miller, M. (1958), "The cost of capital, corporation finance and the theory of investment", *American Economic Review*, Vol. 48, pp. 655-69.
- Modigliani, F. and Miller, M. (1963), "Corporate income taxes and the cost of capital: a correction", *American Economic Review*, Vol. 53 No. 3, pp. 433-43.
- Myers, S. (1984), "The capital structure puzzle", *Journal of Finance*, Vol. 39 No. 3, pp. 575-92.
- Myers, S. and Majluf, N. (1984), "Corporate financing and investment decisions when firms have information that investors do not have", *Journal of Financial Economics*, Vol. 13, pp. 187-221.
- Newman, A., Gunnessee, S. and Hilton, B. (2011), "The applicability of financial theories of capital structure to the Chinese cultural context: a study of privately-owned SMEs", *International Small Business Journal*, May 26.
- Nguyen, T.D.K. and Ramachandran, N. (2006), "Capital structure in small and medium-sized enterprises: the case of Vietnam", *ASEAN Economic Bulletin*, Vol. 23 No. 2, pp. 192-211.
- Nivorozhkin, E. (2003), "The dynamics of capital structure in transition economies", Bank of Finland Institute for Economies in Transition, BOFIT Discussion Papers 2/2003, pp. 1-31.
- Norton, E. (1991), "Capital structure and small public firms", *Journal of Business Venturing*, Vol. 6 No. 4, pp. 287-303.
- Peng, M. and Luo, Y. (2000), "Managerial ties and firm performance in a transition economy: the nature of a micro-macro link", *Academy of Management Journal*, Vol. 43 No. 3, pp. 486-501.
- Petty, J.W. and Bygrave, W.D. (1993), "What does finance have to say to the entrepreneur?", *The Journal of Small Business Finance*, Vol. 2 No. 2, pp. 125-37.
- Pissarides, F. (1999), "Is lack of funds the main obstacle to growth? EBRD's experience with small and medium-sized businesses in central and eastern Europe", *Journal of Business Venturing*, Vol. 14 Nos 5/6, pp. 519-39.
- Pukthuanthong, K. and Walker, T. (2007), "Venture capital in China: a culture shock for western investors", *Management Decision*, Vol. 45 No. 4, pp. 708-47.
- Romano, C.A., Tanewski, G.A. and Kosmas, X.S. (2000), "Capital structure decision making: a model for family business", *Journal of Business Venturing*, Vol. 16 No. 3, pp. 285-310.
- Ruan, W., Tian, G. and Ma, S. (2011), "Managerial ownership, capital structure and firm value: evidence from China's civilian-run firms", *Australasian Accounting Business and Finance Journal*, Vol. 5 No. 3, pp. 73-92.
- Ryan, G.W. and Bernard, H.R. (2003), "Techniques to identify themes", *Field Methods*, Vol. 15, pp. 85-109.
- Scherr, F.C. and Hulburt, H. (2001), "The debt maturity structure of small firms", *Financial Management*, Vol. 30, pp. 85-111.
- Scherr, F.C., Sugrue, T.F. and Ward, J.B. (1993), "Financing the small firm start-up: determinants for debt use", *Journal of Small Business Finance*, Vol. 3 No. 1, pp. 17-36.

- Sogorb-Mira, F. (2005), "How SME uniqueness affects capital structure: evidence from a 1994-1998 Spanish data panel", *Small Business Economics*, Vol. 25 No. 5, pp. 447-57.
- Storey, D.J. (1994), "The role of legal status in influencing bank financing and new firm growth", *Applied Economics*, Vol. 26 No. 2, pp. 129-36.
- Taggart, R.A. (1977), "A model of corporate financing decisions", *Journal of Finance*, Vol. 32 No. 5, pp. 1467-84.
- Tan, J. (2001), "Innovation and risk-taking in a transitional economy: a comparative study of Chinese managers and entrepreneurs", *Journal of Business Venturing*, Vol. 16 No. 4, pp. 359-76.
- Tan, J., Yang, J. and Veliyath, R. (2009), "Particularistic and system trust among small and medium enterprises: a comparative study in China's transition economy", *Journal of Business Venturing*, Vol. 24 No. 6, pp. 544-57.
- Titman, S. and Wessels, R. (1988), "The determinants of capital structure choice", *Journal of Finance*, Vol. 43 No. 1, pp. 1-19.
- Tsang, E.W.K. (1998), "Can guanxi be a source of sustained competitive advantage for doing business in China?", *Academy of Management Executive*, Vol. 12 No. 2, pp. 64-73.
- Van Auken, H.E. (2005), "A model of small firm capital acquisition decisions", *International Entrepreneurship and Management Journal*, Vol. 1, pp. 335-52.
- Van Auken, H.E. and Neeley, L. (1996), "Evidence of bootstrap financing among small start-up firms", *Journal of Entrepreneurial and Small Business Finance*, Vol. 5 No. 3, pp. 235-49.
- Wiklund, J. and Shepherd, D. (2003), "Aspiring for and achieving growth: the moderating role of resources and opportunities", *Journal of Management Studies*, Vol. 40 No. 8, pp. 1919-41.
- Winborg, J. and Landström, H. (1997), "Financial bootstrapping in small businesses – a resource-based view on small business finance", in Reynolds, P.D., Bygrave, W.D., Carter, N.M., Davidsson, P., Gartner, W.B., Mason, C.M. and McDougall, P.P. (Eds), *Frontiers of Entrepreneurship Research*, Babson College, Center for Entrepreneurial Studies, Wellesley, MA, pp. 471-85.
- Wu, W.P. and Leung, A. (2005), "Does a micro-macro link exist between managerial value of reciprocity, social capital and firm performance", *Asia-Pacific Journal of Management*, Vol. 22 No. 4, pp. 445-63.
- Xiao, L. (2011), "Financing high-tech SMEs in China: a three-stage model of business development", *Entrepreneurship & Regional Development*, Vol. 23 Nos 3/4, pp. 217-34.
- Young, M., Peng, M., Ahlstrom, D., Bruton, G. and Jiang, Y. (2008), "Corporate governance in emerging economies: a review of the principal-principal perspective", *Journal of Management Studies*, Vol. 45 No. 1, pp. 198-220.
- Zhang, G. (2008), "The choice of formal or informal finance: evidence from Chengdu, China", *China Economic Review*, Vol. 19 No. 4, pp. 659-78.
- Zheng, C., Morrison, M. and O'Neill, G. (2006), "An empirical study of high performance HRM practices in Chinese SMEs", *International Journal of Human Resource Management*, Vol. 17 No. 10, pp. 1772-803.

Further reading

- Mac an Bhaird, C. (2010), "The Modigliani-Miller proposition after fifty years and its relation to entrepreneurial finance", *Strategic Change*, Vol. 19, pp. 9-28.
- Warner, J. (1977), "Bankruptcy costs: some evidence", *Journal of Finance*, Vol. 32 No. 2, pp. 337-47.

About the authors

Daniel Borgia is an Associate Professor at the University of Nottingham, Ningbo China. His research interests include entrepreneurship, small firm finance, financial education and international business topics, particularly with respect to China. He has published in publications such as the *International Business & Economics Research Journal*, *International Journal of Entrepreneurial Behavior & Research* and *Journal of Financial Education*. Daniel Borgia is the corresponding author and can be contacted at: Daniel.borgia@nottingham.edu.cn

Alexander Newman is an Assistant Professor at the University of Nottingham, Ningbo China. His research interests include small business management, financing and employee behaviour. He has published in publications such as the *International Journal of Small Business* and *International Journal of Human Resource Management*.

To purchase reprints of this article please e-mail: reprints@emeraldinsight.com
Or visit our web site for further details: www.emeraldinsight.com/reprints

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.