

## Measuring Capital Structure Determinants of Small and Medium Enterprises (SMEs): An Assessment of Construct Reliability and Validity of a Proposed Questionnaire

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### Abstract

This paper presents the assessment of reliability and validity of a proposed questionnaire of the capital structure determinants. The questionnaire is developed based on the existing measurement scales from the literature, interviews and focus groups discussions with the SMEs' owners from the East-Coast region of Malaysia. The study analysed a total of 384 questionnaires. This study analyses data using SPSS 24.0. A purification process involves scale reliability and Exploratory Factor Analysis. A total of 11 constructs and 40 out of the initial 52 items represent the theoretical model. Items assigned to each dimension consistently exhibited high loadings on their constructs. In addition, results showed a relatively high internal consistency, with a Cronbach alpha greater than 0.7 for all constructs, except for three of the constructs (i.e. commercial goals, social welfare goals, and external environment). This study contributes to theory extension and testing, verification of the conceptualisation and operationalisation of constructs, and replication of the previous studies. The findings help in introducing a research framework to be as a standard measurement for SMEs' capital structure determinants.

**Key words:** Capital structure; Small and Medium Enterprises (SMEs); Reliability; Exploratory Factor Analysis (EFA); Questionnaire; Malaysia; East-coast region; Cronbach alpha; SPSS 24.0

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### INTRODUCTION

The capital structure decision is considered vital to most of the firms since the ultimate goal of each firm is to maximise returns. According to Shah and Khan (2007), the capital structure decision is the centre of many other corporate finance decisions. The capital structure decisions sometimes are not easy to decide on the best alternatives that will give the best return. A firm has options to finance its activities using personal savings, internal funds, debt, equity or a combination of these.

Given the alternatives of the sources of finance, the question of "How do firms choose its capital structures?" Is still not answerable. The research on the capital structure which explains how firms choose their capital structures had been introduced initially by Modigliani and Miller (1958). Ever since, a number of theories has been used like pecking order theory (Donaldson, 1961; Myers, 1984; Myers & Majluf, 1984), static trade-off theory (Jensen & Meckling, 1976; Myers, 1977), and agency theory (Jensen & Meckling, 1976; Myers, 1977). The theories suggest several factors which might influence the capital structure decision of the firms.

The literature suggests that both owner and firm-related factors influence the capital structure of the SMEs. Previous researches focus mostly on the relationship between the owner (Smallbone et al., 2001; Robb & Fairlie, 2007; Hussain & Matlay, 2007; Vos et al., 2007; Bell & Vos, 2009) or firm-related factors (Berger & Udell, 1998; Romano et al., 2001; Di Patti & Dell'Ariccia, 2004; Nguyen & Ramachandran, 2006; Rozali et al., 2006; Smyrnios & Dana, 2006; Bhaired & Lucey, 2010; Onaolapo et al., 2015) and capital structure. In addition, there has been a relatively little attention to conduct a study on the influence of culture (for example Abdullah et al., 2011; Ibrahim & Masron, 2011) or the business environment for the SMEs' financing decisions.

Moreover, through a thorough literature search, it was found that most of the researches in capital structure

tended to focus on the developed economies (Rajan & Zingales, 1995; Michaelas et al., 1998; Sogorb-Mira, 2005; Delcours, 2007; Fattouh et al., 2008; Frank & Goyal, 2009; Bhaird & Lucey, 2010) with remarkably little from developing countries (Wiwattanakantang, 1999; Bhole & Mahakud, 2004; Changjiang & Huibo, 2001; Kila & Mahmood, 2008). This is in line with the argument of Mat Nawati (2015) who argued that the empirical study on capital structure determinants of the countries of the Association of the Southeast Asian Nations (ASEAN) is still few regardless of the economic significance of these countries.

This study, therefore, investigates the determinants of capital structure in a relatively different context of one developing country, which is Malaysia, and different size of the firm, i.e. micro, small and medium-sized firms.

Following the lead of many prior empirical studies, this study reinvestigates the determinants of capital structure based on firm-specific factors, owner-related factors and external factors (e.g. business culture and business environment), especially those variables found in the Malaysian-based studies. For example, evidence on the significant industry-effect on the Malaysian corporate financing decision has been highlighted by Anuar and Shamsher (1993) and Mohamad (1995). Recently, Abdullah et al. (2011) had conducted a survey on the financing patterns among the Malaysian SMEs. Notably, this current study incorporates cultural (Chui et al., 2002) and macroeconomic factors (Naman & Slevin, 1993; Michaelas et al., 1998; Covin et al., 1999) that were excluded by most of the previous studies.

This study aims to develop a model to explain the determinants of capital structure in SMEs. The study also intends to empirically test the model in a non-western setting. The model testing process will allow the researcher to examine the applicability of the western-developed theory in a different context. The process involves the re-assessment of the dimension, operationalisation of constructs and the evaluation of certain assumptions linked to the findings as reported in the extent literature. It is hoped that the research will assist to broaden existing knowledge on the determinants of capital structure and offer practical insights to public policy-makers as well as financial or non-financial institutions in providing financial facilities to SMEs.

In general, this study intends to answer the following research question:

What are the factors that influence the capital structure of SMEs in the Malaysia?

In addressing the above question, the paper will discuss the literature overview and constructs. This is followed by the theoretical model development. Subsequently, the methods employed in this paper are elaborated in details, followed by thorough presentations of results and discussions. The final section presents conclusions of study.

## 1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Theories of capital structure were originally developed based on the characteristics of large firms. Consequently, the empirical, as well as theoretical development in a capital structure theory gave a relatively considerable emphasis on large-listed firms (see Titman & Wessels, 1988; Rajan & Zingales, 1995; Onalapo et al. 2015). This similar theoretical implication of capital structure can be applied in the SME's context, depending on the distinct approach that they cover. A number of papers have provided empirical evidence on the SME's capital structure, all of them considering the most relevant theories in the literature (see Chittenden et al., 1996; Michaelas et al., 1998; Sogorb & Lopez, 2005; Abor & Biekpe, 2007; Lopez & Aybar, 2007; Zhang, 2008; Borgia & Newman, 2012; Jõeveer, 2013; Balios et al., 2016; Huang et al., 2016).

In whole, there is no optimum capital structure that SMEs should try to achieve. Even though there are enormous financing options, the SMEs still encountered hard challenges in accessing the finance, especially during business start-up stage (Hood, 2000; Carter et al., 2003; Robb & Fairlie, 2007). The SMEs are found to have a different capital structure from large companies. There are a number of factors which differentiate the choice of finance of small firms from large ones. Among the factors are in terms of information that small firm can disclose, asset structure, business planning, profitability, and so on. Larger businesses generally furnish more information to the lenders (Fama & Jensen, 1983; Rajan & Zingales, 1995; Peel & Wilson, 1996) as they comparatively have a lower financial risk and current liabilities relative to total assets, and comparatively higher fixed asset to total asset ratio. Along these lines, Cressy and Olofsson (1997) discovered that small firms have lower tangible assets, higher intangible assets, and a greater financial risk. Those characteristics pose greater difficulties to the SMEs in obtaining external financing compared to large firms. The following points are brief literature and hypotheses for each construct.

### 1.1 Business Planning

A business plan is a detailed study of an organisation's activities. It indicates the organisation's previous state of conditions, its current status and future objectives that it aims to achieve (Ward, 1987; Philip, 1999). Romano et al. (2001) stated that business planning consists of three variables; namely a business plan, a formal strategic long-term plan, and a formal management structure. It is closely associated with a problem of information asymmetry which involves the concept of firm's and outsiders' secrecy (Romano et al., 2001).

Lack of business planning will invariably lead to information opacity. This situation may hinder the firm's

accessibility to external finance (Fabowale et al., 1994; Berger & Udell, 1998; Rozali et al., 2006; Nguyen & Ramachandran, 2006). The problem of information asymmetry is mostly related to the quality of data provided by small firms. Small firms usually reluctant to disclose firm's information to the outsiders (Berger & Udell, 1998). Regular and accurate financial reports and statements which portray the overall business performance including its ability to repay the loan and prepare good financial forecasts (Coleman & Carsky, 1999) can significantly minimise the opacity of information. Besides, it was found that firms with established track records will have relatively lower default rates and lower costs of debt than firms which are still in their formative years (Harris & Raviv, 1991). Therefore, a positive relationship should exist between business planning and external funds in the SMEs, and thus the hypotheses are:

H1.1: There is a negative association between business planning and funds from family and friends.

H1.2: There is a positive association between business planning and debt.

## 1.2 Relationship and Networking

Relationship and networking are found to be related to a combination of agency and information asymmetries problems (Petersen & Rajan, 1994; Cole, 1998). The relationship in business can either be with financial stakeholders (Nguyen & Ramachandran, 2006) or non-financial stakeholders (Parsons & Titman, 2007). Nguyen and Ramachandran (2006) classified it as business and social relations. It is therefore crucial for firms to create strong social and business networks so as to improve the accessibility to finance (Newman et al., 2012). Local banks' personal relationship with clients (for example Krishnan & Moyer, 1997) was in some instances more significant than a detailed evaluation of the financial credibility of the borrower. Banks will use both qualitative and quantitative information to construct the SMEs' loan contracts (Scott, 2006). A good rapport with banks can significantly minimise the asymmetric information as well as ease the liquidity constraints for the borrowers (Petersen & Rajan, 1994). Some writers (Baas & Schrooten, 2006; Abor & Biekpe, 2007) considered that SMEs are normally reliant on their good relationship with banks, unlike large firms, due to the fact that the SMEs' accounting information is not generally of good quality, thus making it difficult for the small firms to secure bank financing.

Moreover, Donnelly et al. (1985) reported that firms which establish and maintain relationships with few financial institutions might have some benefits; such as a guarantee of fund readiness when needed; good rates and terms when requested; and the banks' better understanding and knowledge of the clients' specific needs. It could very well be anticipated that such links and relationships with banks may offer an explicit or implicit guarantee of access

to funds, especially to deal with unforeseen financial needs (Nguyen & Ramachandran, 2006).

Apart from business relations, social relations are also of paramount importance to business because they form a formidable bond and mutual trust and confidence. Social relations are crucial for SMEs to expand the choices of available sources of funds (Petersen & Rajan, 2002). The significance of social relations is acknowledged in China, as well as in Japan, Korea, and Southeast Asia (Yeung & Tung, 1996). In a number of developing countries with poor and often inadequate laws of contract, networking and other similar informal relationships will facilitate business deals without strict application of the existing rules and regulations (Greif, 1993).

Networking offers information about reliability (Nguyen & Ramachandran, 2006). Direct dealing with the firms' counterparts or indirect dealings through the counterparts' network such as family members, can provide good insights into the counterparts' reliability (McMillan & Woodruff, 1999). An association with a network can provide a good indicator to the business community (Holmlund, 1997). Nguyen and Ramachandran (2006) asserted that a manager's conduct towards networking is a crucial factor in securing funds for the firms by way of obtaining trade credits or other short-term liabilities. This is in line with the argument of Newman et al. (2012), who argued that the firm can obtain finance from informal networks and through trade credit if they foster close and firm relations with customers and suppliers.

In another perspective, these factors (relationship and networking) can be described in the forms of transaction lending or relationship lending. Brighi and Torluccio (2007) referred transaction lending as transparent borrowers, whilst a relationship lending is referred to as opaque borrowers. Large firms have a relative advantage in transaction lending to SMEs based on hard information. On the other hand, under relationship lending, the financial institution is heavily reliant on soft information; i.e. a long track record of a good relationship so as to deal with the problem of opacity.

In fact, there will be discriminations in lending especially in a situation in which SMEs did not have a close relationship with their lenders. Lending discrimination may lead to undue limitation of access to loans or reduces the firms' capacity to increase the marketability of their products or goods (Robb & Fairlie, 2007). A close working relationship between the lender and the borrower may help to reduce the problem of information asymmetry through improving information flows (Nguyen & Ramachandran, 2006). Thus, a cordial business-lender relationship is pertinent to ease unwanted difficulties in obtaining external finance (Scott, 2006). A close relationship with lending institutions is essential to avoid lending discrimination (Petersen & Rajan, 1994). Moreover, cordial and continuous

relationships plus good rapport (Berger & Udell, 1998) with lenders may boost the borrowing relations (Han et al., 2009).

Based on the theoretical analysis and empirical evidence from the literature, hypotheses have been formulated in the following way.

H2: A good firm-financial provider relationship will enhance the debt level and the firm's external equity.

H3: A wide networking will increase the level of debt financing of the firm.

### 1.3 Owner's Motivation, Perceptions and Beliefs

According to Fama and Miller (1972), "since perceptions are important determinants of how individuals and firms allocate resources, perceptions are worthy of study." Managers or firms' owners may have their own concerns such as in terms of preferences and risk perceptions (Norton, 1990) financing attitude, culture norm, managerial motivations and self-interest (Friend & Lang, 1988). Michaelis et al. (1998) mentioned in their study that the owners' perceptions and beliefs about external finance affect the capital structure decisions of small firms. Norton (1990) argued that, based on pecking order hypothesis, firms (regardless of their size) believe that management has the most influential effect on the capital structure's formulation. He found that small firms generally practise the management preference, thus they will resort to "no debt at all" concept. He emphasised that small firms are normally reluctant to play the yield curve, thus averse to debt.

Based on the previous literature and qualitative findings, this study expects to have a relationship between "owner's motivations, perceptions and beliefs" and the capital structure. Therefore, a hypothesis has been formulated in the following way.

H4: "Owner's motivations, perceptions and beliefs" are associated negatively with debt or external equity.

### 1.4 Objectives/Goals

An objective also becomes one of the determinants of financing decisions (Barton & Gordon, 1988). The objective(s) might be one or more (McMahon & Stanger, 1995). Dewhurst and Horobin (1998) encouraged the owners of small firms to have commercial and lifestyle goals at some stages of the firms' life cycle. The lifestyle goals could be related to the owners' survival and behaviour in maintaining sufficient income. This is to ensure that the business provides them, and their family with a satisfactory level of funds to enable enjoyment of their chosen lifestyle. Some instances of lifestyle goals can be; to accumulate wealth (Ou & Haynes, 2006) or to support the family by earning enough money from the business (Getz & Carlsen, 2000); and to achieve personal satisfaction and enjoyment as a host apart from receiving extra money from home-stay guests (Lynch, 1999). The overall results show that there is no specific relationship between commercial and lifestyle

goals with the capital structure. However, so far the notion that the aforementioned goals related to lifestyle has never been cited in the developing countries, particularly in Malaysia.

Besides, the research portrays a positive relationship between growth (i.e. expansion) and external equity. For instance, Chaganti et al. (1995) stated that entrepreneurs who are "bullish" about their businesses incline to choose equity instead of debt financing. On the other hand, lucrative small firms which seek to fully exploit the long-term value of their business; favour internal funds.

The firm may also wish to maintain control of their business (Boyer & Roth, 1978; Chittenden et al., 1996; Lopez-Garcia & Sanchez-Adujar, 2007). Some contend that most SMEs do not strive for growth beyond their ability to maintain independence and control (Friend & Lang, 1988; Vos et al., 2007; Moro et al., 2010). They are unlikely reliant on debt finance. For instance, Friend and Lang (1988) stated that the debt ratio is negatively linked to management shareholding. Conversely, for those who choose to use business for steady employment were found to be reliant on debt financing (Romano et al., 2001). In light of this inconclusive evidence, researchers formulate hypotheses in the following way.

H5.1: SMEs which focus on lifestyle and social welfare goals are associated negatively with debt or external equity.

H5.2: SMEs which focus on lifestyle and social welfare goals are associated positively with internal capital and retained profits.

H5.3: SMEs which focus on commercial goals are associated positively with debt or external equity.

H5.4: SMEs which focus on commercial goals are associated negatively with internal capital and retained profits.

### 1.5 Environment

This variable is recently modeled by research scholars and is given importance to the study of capital structure. The environment can be divided into stable, benign (Naman & Slevin, 1993; Covin et al., 1999), and external environment. A country's macroeconomic data like GDP growth, inflation rate and interest rate may have consequences on the debt available to the SMEs. Michaelis et al. (1998) stated about the consequence of environmental factor on the capital structure, which was mostly studied in the developed countries. There are few studies which emphasised on the environmental factor as an influencing factor in corporate financing behaviour in the developing countries. In the wake of the recent economic crisis in ASEAN countries, further research on these factors will be more encouraging. Even though current examination of these factors had been conducted, contradictory outcomes are still found on the implication of macroeconomic variables on the capital structure

choice. For example, the inflation rates were reported negatively influencing the capital structure choice by Gulati (1997), Booth et al. (2001) and Hatzinikolaou et al. (2002). However, a positive relationship between the inflation rate and capital structure choice was found by Sener (1989) and Taggart (1995). Additionally, Mutenheri and Green (2002) found no positive association between inflation and capital structure choice.

Moreover, Michaelas et al. (1998) stated that firms tend to rely more on short-term debt in dealing with the liquidity problems during the economic recession. These problems require more attention in the ASEAN context. It was argued in the current study of capital structure in certain ASEAN countries that the 1997 economic turmoil has aroused the managers' attention to be more careful in taking up debt. Additionally, banks had been rigid in giving loans to companies during and after the crisis (Deesomsak et al., 2004).

In addition, La Porta et al. (1998) stressed that the contents of the laws of various countries and their standard of enforcement seemed to be one of the determinants of the firms' capital structure choice. They stated that countries in which common law systems are applicable provide foreign investors (the providers of equity or debt) better protection than countries which practise civil law. Another main concern is corruption (La Porta et al., 1998). If the level of corruption was high (i.e. when the integrity of the legal system is questionable), firms will resort to debt instead of equity, particularly the short-term debt.

Gaud et al. (2005) asserted that the debate as to which theory of capital structure provides a better explanation of the firm's capital structure choices is still unresolved. Despite the fact that capital structure theories have attempted to explain firms' capital structure decisions, factors relating to the firm and macroeconomic circumstances affect the firms' capital structure in different situations. This is in line with the study of Gleason et al. (2000). They stated that the firm's capital structure may be affected by the economic system, legal and tax environment, and the technological competencies. Korajczyk and Levy (2003) also agreed that both macroeconomic conditions and firm-specific factors have an effect on firms' financing choices.

A number of international studies have reported contradictory results. For example, Booth et al. (2001) stated that although the debt ratios in developing as well as developed countries were influenced by the same factors, the macroeconomic conditions such as inflation rates and GDP growth rates, play a prominent role in determining the firms' capital structure. On the other hand, Rajan and Zingales (1995) suggested that future study should continue to develop the relationship between theoretical models and empirical results by applying the models to different situations and to integrate the institutional dissimilarities between countries when identifying the theoretical models.

Having discussed the arguments, literature, and qualitative study, the research expects to have a link between business environment and capital structure. Thus the hypothesis for this factor is as follows:

H6: There is a relationship between business environment and debt or external equity.

## 1.6 Culture

Every community has its own ethics, attitudes, philosophy, beliefs and manners. Thus, every person in the community has shared goals and meanings distinguishable from each other; this is known as "culture". This is in line with the statement of Nwankwo and Lindridge (1998, p.201), who identified culture as – "race, religion, language group, shared history and origin". On the other hand, Hofstede et al. (1991) referred cultural as a collective programming of the mind which differentiates the members of one group from another.

In this study, the researchers used Schwartz' (1994) measurements of cultural dimensions, instead of Hofstede's (1980). The main reason was that the former's measurements have been applied to examine the theoretical impact of culture on capital structure's decisions (Chui et al., 2002). Moreover, it is pertinent to apply individualised measures in considering the culture of a country so as to fully comprehend the country's level of variation on cultural dimensions, and whether or not the variation is adequate for hypothesis testing. This has been emphasised by Clugston et al. (2000). They stated that individualised measures must be used when culture is an independent variable.

This study considers two dimensions of culture; which are conservatism and mastery. Items of conservatism are associated with employees and the owners, targeting at an amicable relationship, safeguarding of public image, or evading ambiguity. The items also have been identified as a main cultural factor in other studies (see Licht, 2001; Chui et al., 2002; Castro et al., 2007; Siegel et al., 2007; Breuer & Salzmann, 2008; Shao et al., 2009; Li et al., 2011). On the other hand, the items in mastery are related to individual accomplishment, individual actions or decisions, aiming at individual contentment. When the owners put special attention to their own accomplishment, they would resort to stringent policy for the firm, choose safer projects and consequently would use fewer debts (Hirshleifer & Thakor, 1989). These items have been taken into consideration to represent mastery factor in various studies (see Licht, 2001; Chui et al., 2002; Siegel et al., 2007; Castro et al., 2007; Breuer & Salzmann, 2008; Shao et al., 2009).

Even though culture has long been recognised for its importance, the effect of culture on finance has not been thoroughly examined. Different cultures will definitely have different attitudes towards finance (i.e. financing choices or capital structure). Cultural characteristics are different from one country to another and among

various regions (Clugston et al., 2000). Chui et al. (2002) emphasised that culture does influence the capital structure. They found that firms in a country which put a high priority on “Conservatism” used less debt in the capital structures since they are more concerned with conducive working relationships, social cohesion, safeguarding public image, security, conformity, and tradition. Likewise, countries which put a high priority on “Mastery” are more likely to utilise less debt financing since they are more concerned with control and individual accomplishment.

Therefore, hypotheses have been formulated in the following way.

H7.1a: There is a positive association between conservatism and internal sources of finance.

H7.1b: There is a negative association between conservatism and debt financing.

H7.2a: There is a positive association between mastery and internal sources of finance.

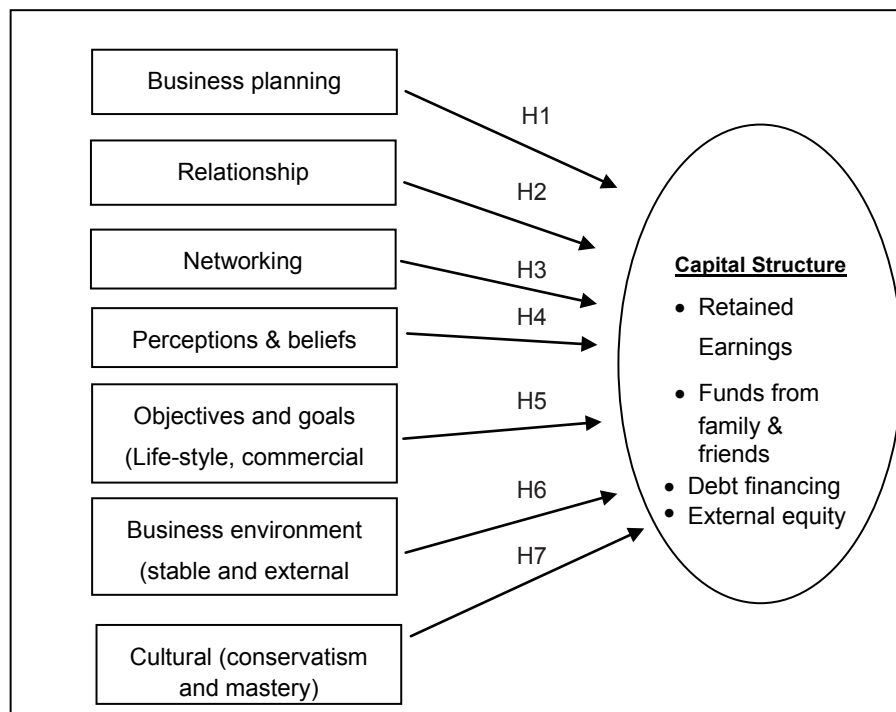
H7.2b: There is a negative association between mastery and debt financing.

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## 2. THEORETICAL MODEL

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Following arguments in the earlier section, the theoretical model is shown below as in Figure 1.



**Figure 1**  
**The Conceptual Model of Determinants of Capital Structure**

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## 3. PROCEDURES FOR COLLECTING DATA

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### 3.1 Instrument

The purpose of this paper is to examine factors that influenced the capital structure decisions among SMEs in Malaysia. Three types of questions have been used in the present questionnaire. The first type employed a point interval scale (i.e. 5-point Likert scale). The second type of question involved nominal scale, asking the respondents to tick their usage of the financing sources. The measurement is 0 for “not use” and 1 for “use”. In other questions, the answers should be chosen by ticking the ones that best describe the respondents and their firms. The preparation

of the questionnaires had been made in three languages; Malay, Mandarin, and English. The researcher used the back-translation technique (Mullen, 1995) in preparing these three versions of questionnaires. The content of each item of the questionnaire was evaluated by five academics (i.e. a supervisor and four lecturers from Malaysia) and three Malaysian SMEs’ owners so as to maintain suitable face, content and semantic uniformity of the translated instrument, following a method outlined by Brislin (1970).

### 3.2 Unit of Analysis

This study defines SMEs as firms with a total workforce of less than 150 or annual sales turnover of RM25 million for the manufacturing sector and a total number of workforce less than 50 employees or sales turnover

of RM5 million for the service sector. Malaysia was chosen as a research context for this study to test the external validity of western-developed theories. This study followed the recommendation of early researchers (e.g. Boyacigiller & Adler, 1991; Peng et al., 1991) by collecting data in a non-western country. Conducting this research in Malaysia thus can facilitate the assessment of external validity and generalisability of theories. The participants were the SMEs' owners from three main ethnic groups (i.e. Malay, Chinese, and Indian). 384 questionnaires were returned and completed fully by the respondents and satisfied the researcher.

### 3.3 Present Measurement Scales

The literature search is conducted to ascertain the domains of measurement scales. Domains of constructs were originally taken from existing related concepts and scales in a number of academic journals. The study identified eight constructs after reviewing the literature. The

constructs were identified and integrated to make them accurate and complete.

After a comprehensive literature search, the researcher had conducted focus groups discussions and semi-structured interviews. Several items had been derived from these two focus groups discussions and 15 semi-structured interviews. The items were extracted using data reduction and inter-rater reliability test. Next, the researchers designed a coding scheme based on the literature and transcripts. Data was clustered into relevant codes. Items were subsequently drawn from each group and compared with those obtained from the literature.

Samples of constructs plus their corresponding items are shown in the following table. The table shows that there are 34 items which represent eight (8) constructs of capital structure determinants. The table also presents items derived from the qualitative study.

**Table 1**  
**Constructs and Items Derived From the Literature and a Qualitative Study**

<u>Determinants of capital structure</u>		<u>Items</u>	<u>Sources for items' measurements</u>
Business planning	BP1	Formal business plan	Romano et al. (2001)
	BP2	Formal strategic plan	
	BP3	Formal management structure	
	BP4	Business performance appraisal	
Relationship	RS1	Know hobbies of managers (i.e. financial provider)	Nguyen and Ramachandran (2006)
	RS2	Invite the financial provider to visit firm	
	RS3	Close relationship with the financial provider	
	RS4	Send a performance report to the financial provider regularly	
	RS5	Provide data to the financial provider when requested	
	RS6	Regular review of a relationship with the financial provider	
	RS7	Review services of the financial provider regularly	
	RS8	Duration of relationship with the financial provider	
	RS9	Regular review of procedures in getting credits	
Networking	NW1	Be regular clients	Nguyen and Ramachandran (2006)
	NW2	Pay in time	
	NW3	Visit the financial provider on regular basis	
	NW4	Offer personal greetings to the financial provider	
	NW5	The financial providers are family members or friends	
Lifestyle goals	LSG1	To accumulate wealth	Romano et al. (2001)
	LSG2	To improve lifestyle	
	LSG3	To develop hobbies or skills	
	LSG4	Liked challenge	
Commercial goals	CG1	To maintain control	Romano et al. (2001)
	CG2	To expand the firms	
	CG3	To increase firm's value	
	CG4	To repay borrowing	
Social welfare goals	SG1	To suit family commitment	Romano et al. (2001)
	SG2	To provide jobs to family and friends	
	SG3	To pass onto the next generation	

To be continued

Continued

<b>Determinants of capital structure</b>	<b>Items</b>	<b>Sources for items' measurements</b>
Stable/ Dynamic Environment	SEV1	It is very stressful and hard to keep afloat in this industry
	SEV2	There is little threat to the survival and well-being of my business
	SEV3	There are rich investment and marketing opportunities
	SEV4	My business must frequently change its marketing practices
Benign/ Hostile Environment	BEV1	One wrong decision could easily threaten the viability of my business
	BEV2	The failure rate of businesses in this industry is high
Perceptions and Beliefs	PB1	Culture norms (e.g. we must avoid any greedy attitudes)
	PB2	Belief in religion (e.g. Muslims are encouraged to rely on internal sources of funds instead of borrowing money from financial institutions)
	PB3	Way of life (e.g. we prefer not to borrow to avoid burden of debt)
	PB4	Financing attitude (e.g. risk averse or risk taker)
External Environment	EEV1	High social pressure from the society could affect my business
	EEV2	Strict government's rules and regulation could hinder the viability of my business.
	EEV3	Economic situation of the country could affect the survival of my business (e.g. inflation/recession)
Mastery	MS1	Details of job requirements and instructions are important
	MS2	Group success is less important than owner's success
	MS3	An aggressive financing policy is important for the firm
	MS4	Group interests are less important than owner's interest
	MS5	An achievement of owner's goals is more important for the company.
Conservatism	CSV1	Rules and regulations are important to inform employees what the organisation expects from them.
	CSV2	Standard operating procedures are helpful to employees on the job.
	CSV3	Harmonious working relationship and social harmony are important for the company.
	CSV4	Instructions for operations are important for employees on the job.
	CSV5	Preserving public image is one of the main policies of the company.

Source: Developed for this study.

### 3.4 Content Validation

At this stage, the researcher reviewed all potential items and selected items that best capture each dimension of capital structure determinants. The final list of items had been decided after thorough discussions with the experts and the researchers. In total, 52 items have been generated, with the following constructs distribution: four (4) items for business planning, nine (9) items for relationship, five (5) items for networking, four (4) items for life-style goals, four (4) items for commercial goals, three (3) items for social welfare goals, four (4) items for stable environment, two (2) items for benign environment, three (3) items regarding external environment, four (4) items concerning perceptions and beliefs, five (5) items in relation to mastery, and five (5) items concerning conservatism construct.

### 3.5 Items Purification

There are 52 items which had been used in measuring 12 constructs of the capital structure determinants. The data obtained were subjected to a purification of measurement scales. The purification process involved scale reliability

and EFA. This study used SPSS 24.0 for Windows to measure coefficient alpha and item-to-total correlation before proceeding to the EFA.

The researcher conducted EFA by dividing the constructs into five (5) groups. The number of observations per item for each analysis was at least 5:1 as suggested by Cavusgil and Zou (1994) and Hair et al. (2010). Following the suggestion of Menon et al. (1996), this study assesses few measurement models in order to produce more reliable results, meaning that the study should aim to achieve the minimum of 5 participants per variable.

The researcher grouped the theoretically related constructs based on the literature reviews. The first group consisted of the factors related to objectives and goals (11 variables), the second group comprised of factors related to the "perceptions and beliefs" and "relationship and networking" (18 variables), and the third group consisted of factors related to "business planning" (4 variables), the fourth and fifth groups consisted of cultural dimensions (10 variables) and environmental factors (9 variables) respectively.



## 4. RESULTS AND DISCUSSIONS

Overall, the KMO measure for all items in each variable shows either meritorious or mediocre sample adequacy (Kaiser, 1974) with a value of 0.678 for objectives/goals, 0.635 for *Relationship, networking, and perceptions and beliefs*, 0.861 for *business planning*, 0.833 for *culture*, and 0.675 for *the environment*. The Bartlett's Test of Sphericity supported the factorability of the correlation matrix as it reached statistical significance (0.000).

### 4.1 Objectives/ Goals

The first group comprised of life-cycle goals, commercial goals, and social welfare goals. All variables were correlated fairly well. A three-factor solution was produced after rotation. All the loadings were above 0.7. The item-to-total correlations were above 0.5 for all variables. Moreover, the Cronbach's alpha for life-cycle goals construct was 0.898. The Cronbach's alphas were 0.634 and 0.514 for commercial and social welfare goals, respectively. The coefficients were below 0.70. However, they are still acceptable as recommended by Nunnally (1978).

### 4.2 Relationship, Networking, and Perceptions and Beliefs

The second group consisted of 18 items measuring the "perceptions and beliefs" and "relationship" and "networking". A three-factor solution was produced after rotation. Eight items were deleted because of either cross-loaded or communality values less than 0.50. In the second run of factor analysis, all the factor loadings for both factors were above 0.7. The Cronbach's alpha for "networking" and "perceptions and beliefs" were 0.85 and 0.817 respectively, and item to total correlations for both constructs were above 0.5 (Hair et al., 2010).

Interestingly, for the construct of "relationship", the initial reliability alpha was 0.787. However, the corrected item-to-total correlations for two items were less than 0.30 ("provide data to the financial provider when requested" and "review services of the financial provider on a regular basis"). The values in the column labeled "Alpha if items are deleted" indicated that these two items would increase the reliability if they were deleted (i.e. more than 0.787). Therefore, both items were deleted from this factor. Hence, the final items in this factor remain only four items. The reliability alpha has been re-analysed and the new value for Cronbach's alpha is 0.894. The total correlation for all items is relatively good as it is higher than 0.3. The values in the column labeled "Alpha if items are deleted" are less than the overall reliability of 0.894, indicate that none of the items would increase the reliability if they were deleted.

### 4.3 Business Planning

The third group comprised of four items. The EFA result revealed that the items loaded clearly on one factor.

In addition, the assessment of internal consistency reliability showed satisfactory levels of coefficient alphas for the factor ( $\alpha=0.96$ ). For further examination of the internal consistency, this study confirmed the reliability of this factor by looking at the Pearson inter-correlation for the items included in this factor. They were all substantial at 0.001 level. Moreover, item-to-total correlations were found to be above the threshold value (0.35).

### 4.4 Business Culture Orientations

The factor analysis has been run on 10 items measuring business cultural orientations. These 10 variables were meticulously selected after reviewing finance and management literature and a qualitative study. In order to enhance the factor solution of PCA of business cultural orientation, one variable (i.e. Details of job requirements and instructions are important) was dropped from the analysis because it has a communality value less than 0.5 (communality= 0.417).

In the second run of factor analysis, all factor loadings for both factors were above 0.7. As to the dimensionality of the remaining items, the EFA result depicted that they loaded evidently (above 0.5) on two factors. The first factor (i.e. conservatism) consisted of five variables, while the second factor (i.e. mastery) found to load with four variables. The communalities values for all items were above 0.5. In addition, the Cronbach's alpha for conservatism and mastery were 0.893 and 0.897 respectively. Item to total correlations for both constructs were above 0.5 (Hair et al., 2010).

### 4.5 Environment

Two items were dropped from the first run of EFA due to low communality (below 0.5) and cross-loaded. In the second run of EFA, most variables loaded highly on two factors and all communalities were higher than 0.5 which were good enough for this study. Four items were found to load onto the first factor (i.e. stable environment) and three items load on the second factor (i.e. external environment). The reliability Alpha for the first factor was higher than the standard estimates of 0.70 as recommended by Nunnally and Bernstein (1994). The reliability Alpha of the second factor was 0.604. Although the coefficient was below 0.70, it is still acceptable as it is higher than 0.50 as recommended by Nunnally (1978). For further examination of the internal consistency, the study confirmed the reliability of both factors by looking at the Pearson inter-correlation for the items included in this factor. They were all significant at 0.001 level. The total correlation for all items is higher than 0.3, which is relatively good (Field, 2005). The values in the column labeled "Alpha if items are deleted" indicate that none of the items here would increase the reliability if they were deleted because all the values in this column are less than the overall reliability.

## CONCLUSION

The aim of this study is to identify the factors which affect the capital structure decisions in the Malaysian SMEs. The outcomes produced items which confirmed that there are various factors which affect them in making capital structure decisions. Business planning like devising a business plan, strategic plan, management structure, and business performance evaluation by the firms play a pivotal role in promoting firms to use debt. The objectives and goals of the business and their owners may influence the way on how the firms choose their financing capital. Additionally, the relationship and networking of the SMEs with outsiders and the perceptions and beliefs of the firms' decision makers play a key role in shaping the financial decisions of the SMEs. Apart from internal factors, external factors like culture and environment will also affect the capital structure choices of the SMEs. Therefore, the policy-makers should control or maintain or improve the economic system, legal environment, tax environment, inflation rate and other related factors so that numerous choices of financial sources are accessible to the SMEs.

## THEORETICAL IMPLICATIONS

It is hoped that this research would be able to contribute to theory extension and testing, verification of the conceptualisation and operationalisation of constructs, and replication of the previous studies. First, the study will expand existing knowledge by inserting alternative insights into factors that give impact to capital structure determinants. This study will demonstrate factors like business planning, goals, relationship, networking, cultural orientations, environment, and owner's perceptions

and beliefs. The relevant attitudinal factors that affect the utilisation of theories, originally suited the western environment had been tested to non-western context.

Second, this study aims to achieve a better understanding about the dimensionality and operationalisation of concepts such as culture, perceptions and environment. In addition, the measurement scales did not undergo proper validity and reliability tests in the past. The study shows the significant dimensions of all constructs from the Malaysian SMEs owners' perspectives. Technically, this study also offers confirmations on reliability and construct validity of previous scales.

Third, this study adds to current knowledge by re-assessing partial findings reported in the past studies. For instance, researchers such as Michaelas et al. (1998) and Romano et al. (2001) have suggested that owner's perceptions, business environment and culture are correlated with the capital structure determinants, but these factors have not been tested in their studies. In addition, relatively few studies focused on those factors, except the study of Norton (1990), Gleason et al. (2000), Chui et al. (2002), and Gaud et al. (2003). This research partially emulates and further expands those studies by investigating the relationship between these constructs, which are parts of the capital structure determinants' model.

Finally, the research framework of this study can be introduced as a standard measurement to gauge capital structure determinants of the SMEs. This research contributes to the literature, by studying the interaction between financing preferences and factors influencing the financing choices (i.e. capital structure). Hence, it facilitates further development of a model to predict capital structure determinants.

**Table 2**  
**Final results of Exploratory Factor Analysis**

Items		Item-total-correlation	Factor 1	Factor 2	Factor 3	Communalities
<b>1<sup>st</sup> group: Objectives and goals</b>						
<u>Lifestyle goals (LSG) (<math>\alpha=0.898</math>)</u>						
Develop hobbies or skills	LSG3	.827	<b>.920</b>			.853
Improve lifestyle	LSG2	.797	<b>.907</b>			.827
Accumulate wealth	LSG1	.771	<b>.888</b>			.803
<u>Commercial goals (CG) (<math>\alpha=0.634</math>)</u>						
Increase firm's value	CG3	.462		.702		.518
Expand the firm	CG2	.399		.756		.582
Repay borrowing	CG4	.398		.579		.509
Maintain control	CG1	.492		.765		.586
<u>Social welfare goals (SWG) (<math>\alpha=0.514</math>)</u>						
Family tradition	SG3	.348			<b>.639</b>	.517
Fit around family commitment	SG1	.365			<b>.724</b>	.558

To be continued

Continued

Items		Item-total-correlation	Factor 1	Factor 2	Factor 3	Communalities
Provide job to family and friends	SG2	.432			<b>.738</b>	.585
<b>2<sup>nd</sup> group: Perceptions &amp; Beliefs and Relationship &amp; Networking</b>						
<u>Relationship(RS) (<math>\alpha=0.894</math>)</u>						
Close relationship with the financial provider	RS3	.636	<b>.825</b>			.686
Duration of relationship of the firm with the financial provider	RS8	.779	<b>.904</b>			.819
Regular review of a relationship with the financial provider	RS6	.854	<b>.909</b>			.831
Regular review of procedures in getting credits	RS9	.648	<b>.852</b>			.733
<u>Networking (NW) (<math>\alpha=0.85</math>)</u>						
Be regular clients	NW1			.963		.927
Personal greetings to the financial provider	NW4			.965		.932
<u>Perceptions &amp; beliefs (PB) (<math>\alpha=0.817</math>)</u>						
Culture norms	PB1	.734			<b>.805</b>	.763
Belief in religion	PB2	.622			<b>.721</b>	.592
Way of life	PB3	.795			<b>.872</b>	.831
Financing attitude	PB4	.520			<b>.715</b>	.562
<b>3<sup>rd</sup> group: Business plan (BP) (<math>\alpha=0.96</math>)</b>						
Formal business plan	BP1	.896	<b>.884</b>			.880
Formal strategic plan	BP2	.922	<b>.886</b>			.909
Formal management structure	BP3	.907	<b>.891</b>			.900
Business performance appraisal	BP4	.879	<b>.889</b>			.879
<b>4<sup>th</sup> group: Cultural (BC)</b>						
<u>Conservatism (CSV) (<math>\alpha=0.893</math>)</u>						
Rules and regulations are important to inform employees what the organisation expects from them	CSV1	.603	<b>.737</b>			.543
Standard operating procedures are helpful to employees on the job	CSV2	.808	<b>.889</b>			.791
Harmonious working relationship and social harmony are important for the company	CSV3	.830	<b>.905</b>			.821
Instructions for operations are important for employees on the job	CSV4	.884	<b>.935</b>			.879
Preserving public image is one of the main policies of the company	CSV5	.694	<b>.717</b>			.517
<u>Mastery (MS) (<math>\alpha=0.897</math>)</u>						
Group success is less important than owner's success	MS2	.790		.892		.795
An aggressive financing policy is important for the firm	MS3	.815		.910		.829
Group interests are less important than owner's interest	MS4	.877		.942		.890
Achievement of owner's goals is more important for the company	MS5	.631		.764		.595
<b>5<sup>th</sup> group: Business Environment (EV)</b>						
<u>Stable environment (SEV) (<math>\alpha=0.854</math>)</u>						
It is very stressful and hard to keep afloat in this industry	SEV1	.858	<b>.675</b>			.526
There is little threat to the survival and well-being of my business	SEV2	.704	<b>.939</b>			.882
There are rich investment and marketing opportunities	SEV3	.738	<b>.824</b>			.837
My business must frequently change its marketing practices	SEV4	.607	<b>.886</b>			.785
<u>External environment (EEV) (<math>\alpha=0.604</math>)</u>						
High social pressure from the society could affect my business	EEV1	.301		.535		.512
Strict government's rules and regulation could hinder the viability of my business	EEV2	.551		.893		.839
Economic situation of the country could affect the survival of my business	EEV3	.498		.848		.786

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