**DETERMINANTS OF CAPITAL STRUCTURE: EVIDENCE FROM
MALAYSIAN SMEs**

NURHAYATI BINTI MASOR

MASTER OF SCIENCE (INTERNATIONAL ACCOUNTING)

UNIVERSITI UTARA MALAYSIA

June 2017

DETERMINANTS OF CAPITAL STRUCTURE: EVIDENCE FROM MALAYSIAN SMEs

BY

NURHAYATI BINTI MASOR

Thesis Submitted to Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia, In Fulfillment of the Requirement for the Degree of Master of Science (International Accounting)

Pusat Pengajian Perakaunan
Tunku Puteri Intan Safinaz
TUNKU PUTERI INTAN SAFINAZ SCHOOL OF ACCOUNTANCY

Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PENYELIDIKAN
(Certification of Research Paper)

Saya, mengaku bertandatangan, memperakukan bahawa
(I, the undersigned, certified that)
<u>**NURHAYATI BINTI MASOR (817814)**</u>

Calon untuk Ijazah Sarjana
(Candidate for the degree of)
<u>**MASTER OF SCIENCE (INTERNATIONAL ACCOUNTING)**</u>

telah mengemukakan kertas penyelidikan yang bertajuk
(has presented his/her research paper of the following title)

DETERMINANTS OF CAPITAL STRUCTURE: EVIDENCE FROM MALAYSIAN SMEs

Seperti yang tercatat di muka surat tajuk dan kulit kertas penyelidikan
(as it appears on the title page and front cover of the research paper)

Bahawa kertas penyelidikan tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.
(that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the research paper).

Nama Penyelia   :   <u>**PROF. DR. AZHAR ABDUL RAHMAN**</u>
(Name of Supervisor)

Tandatangan   :
(Signature)

Tarikh   :   <u>11 - 6 - 2017</u>
(Date)

PERMISSION TO USE

In constructing this thesis, which serves as a partial fulfillment of the requirements for the award of postgraduate degree from University Utara Malaysia (UUM), I hereby consent for the university library to make it unconditionally accessible for verification. I further agree that approval to obtain this thesis, either in part or in whole, for academic pursuits may be given by my supervisor Prof. Dr. Azhar bin Abdul Rahman or the Dean Othman Yeop Abdullah, Graduate School of Business. Similarly, utilization of this thesis or parts thereof for financial benefit shall not be allowed without prior written approval. In addition, due acknowledgement should be given to me and to Universiti Utara Malaysia for any academic utilization, which may be made of any material, derived from this thesis. Demand for authorization to duplicate or to make other utilization of material in this thesis, in its entirety or to a limited extent, ought to be tended to:

Dean Othman Yeop Abdullah, Graduate School of Business

Universiti Utara, Malaysia

06010 Sintok

Kedah Darul Aman

ABSTRACT

This paper aims to investigate the determinants of capital structure of small and medium enterprises (SMEs) from manufacturing sector in Malaysia. Specifically, this study wants to examine the effect of asset structure, profitability, quality of information, size and age on leverage. Multivariate regression analysis and Pearson's correlation analysis were used to investigate the most significant factors that affect the capital structure choice of Malaysian SMEs during the year 2013. In the first model, both results find a negative and significant relationship for profitability and size with leverage while asset structure, quality of information and age show negative but not significant relationship with leverage. However, using a second model, asset structure shows a significant positive relationship with leverage, while quality of information shows significant negative relationship with leverage. The analysis indicates that firstly; the results are consistent with some capital structure theories such as trade-off theory and pecking order theory. Secondly, quality of information, asset structure, profitability and size are important factors that affect capital structure choice of Malaysian SMEs.

Keywords: Capital Structure, leverage, SMEs, pecking order theory, trade-off theory

ABSTRAK

Kajian ini bertujuan untuk mengkaji faktor-faktor yang mempengaruhi struktur modal dalam industri kecil dan sederhana (IKS) dalam sektor pembuatan di Malaysia. Secara khususnya, kajian ini bertujuan untuk mengkaji kesan struktur aset, keberuntungan, kualiti maklumat, saiz dan usia ke atas leveraj. Analisis regrasi bersilang dan analisis korelasi Pearson digunakan untuk mengkaji faktor-faktor yang paling memberi kesan ke atas penentuan pemilihan struktur modal oleh syarikat-syarikat IKS di malaysia. Dalam model pertama, kedua- dua hasil ujian menunjukkan faktor keberuntungan dan saiz adalah berkait secara negatif dan signifikan dengan leveraj manakala struktur asset, kualiti maklumat dan usia adalah negatif dan tidak signifikan dengan leveraj. Walau bagaimanapun, dengan menggunakan model kedua, kualiti maklumat didapati berkait secara negatif dan signifikan dengan leveraj, manakala struktur asset pula adalah berkait secara posititif dan signifikan dengan leveraj. Analisis kajian menunjukkan bahawa pertamanya; dapatan kajian ini adalah bersesuaian dengan teori struktur modal seperti *'trade-off theory'* dan *'pecking order theory'*. Kedua, kualiti maklumat, struktur asset, keberuntungan dan saiz adalah faktor-faktor penting dalam menentukan pilihan struktur modal oleh syarikat-syarikat IKS di Malaysia.

Kata kunci: Struktur modal, leveraj, IKS, 'pecking order theory', 'trade-off theory'

ACKNOWLEDGEMENT

In the name of Allah, the Beneficent and the Merciful. Power and authority belongs to Allah along, who can decide a future to be certain, and who gave me the opportunity to undertake this study and eventually make it possible.

I would like to start with special appreciation to my lecturers in the School of Accountancy, College of Business in the Graduate School of Business (OYA) as a whole, especially those who taught me in one course or the other. My profound gratitude goes to my amiable supervisor Prof. Dr. Azhar Bin Abdul Rahman for his valuable guidance, advices, patience, and generous amount of time and support in guiding me which made this research successful.

I wish to express my indebted gratitude and acknowledgement to my parent in person of Masor Bin Dolah and Sharifah Binti Lateh for their caring, loving, support and concern given to me throughout my life. My propound appreciation also goes to my brothers, sisters and the entire family members for their support and prayers.

Finally, my appreciation goes to all my colleagues especially in person of Mohammad Fazzarudin bin Mohd Sabri, Maimuna Yahaya Kansila, Siti Zulaikha Zolkepli, Mozian Abuzaid Abdalla, Nor Fazana Che Ya and all my friends those supported me either direct or indirectly in order to finish this thesis. You are always been there giving me moral support and sharing tears, laughter and happiness and have made my life in UUM a lot of memories.

May the blessing of Allah be upon us in the here and Here-after.

TABLE OF CONTENT

LIST OF TABLES

9

LIST OF FIGURES

LIST OF ABBREVIATIONS

AS	:	Asset Structure
CCM	:	Companies Commission of Malaysia
EBIT	:	Earnings Before Interest and Tax
FS	:	Financial Statement
GDP	:	growth domestic product
GLCs	:	Government-linked Companies
LEV	:	Leverage
MASB	:	Malaysian Accounting Standards Board
MFRS	:	Malaysian Financial Reporting Standards
MITI	:	Ministry of International Trade and Industry
MM	:	Modigliani and Miller
MNCs	:	Multinational Corporations
MOSTI	:	Ministry of Science, Technology and Innovation
MPERS	:	Malaysian Private Entities Reporting Standards
NSDC	:	National SME Development Council
OLS	:	Ordinary-Least-Squares
PERS	:	Private Entity Reporting Standards
POT	:	Pecking Order Theory
PROF	:	Profitability
QUAL	:	Quality of Information
RM / MYR	:	Ringgit Malaysia
ROA	:	Return on Asset
ROE	:	Return on Equity
SME	:	small and medium sized enterprises
SMIDEC	:	Small and Medium Development Corporation
TOT	:	Trade of Theory
VDP	:	Vendor Development Program

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter aims to present an overview of the importance of capital structure of SMEs and to briefly discuss the background of SMEs in Malaysia. This chapter also provides discussions on the background of the study, problem statement, research question, research objective, scope and limitations of the study, and lastly, the organisation of the thesis.

1.1 Background of the Study

Financing decision is one of the most significant decisions that a firm need to consider as this decision can influence the firm value and determine whether a firm can expand its business or face bankruptcy. A wrong decision made by the manager may lead to financial distress and ultimately affect the business activity. In this light, a blend of securities and financing sources by an organisation to finance its investment activities is known as capital structure (Zabri, 2012), and managers play a significant role in selecting the best financing source that matches the business organisation.

The financing sources available either through equity or debt. The equity is given by the proprietor and shareholders, while, debt is acquired or obtained from banks and

monetary establishments. In other words, capital structure is known as the blending of financing source which is derived from equity or debt (Saarani and Shahadan, 2013b).

In this study, capital structure is a paramount importance as it represents fortifying sources needed by SMEs to operate and expand their business. Several researchers have found that there are many factors that impact the capital structure of Malaysian's companies, namely profitability, firm size, growth opportunity, asset tangibility, liquidity, firm age, non-debt tax shield, investment, earning volatility and asset structure (Benkraiem and Gurau, 2013; Haron, 2014; Hussain, Hamza, and Miras, 2015; Saarani and Shahadan, 2013b; Zabri, 2012). Similar factors have also influenced the capital structure of firms in other countries such as Iran, Ghana, India, Nigeria, Pakistan and so on (Alipour, Seddigh and Derakhshan, 2015; Boateng, 2004; Chadha and Sharma, 2015; Ogbulu and Emeni, 2012; Sheikh and Wang, 2011).

This study wants to examine the influence of capital structure on Malaysian SMEs. Herewith the study briefly explain the chronology of SME definition which is previously its name was micro, small and medium enterprises (MSMEs) before changed to SMEs. A review of the SME definition has been conducted in 2013. The new definition was approved in the 14th National SME Development Council (NSDC) Meeting in July 2013. The definition covers all sectors, including services, manufacturing, agriculture, construction and mining, and quarrying. There are two criteria to identify the definition of SME that is sales turnover and the number of full-time employees. For manufacturing sector, firms with sales turnover not surpassing RM50 million or number of full-time employees not surpassing 200. On the other hand, for services and other sectors, SME

2

firms with sales turnover not surpassing RM20 million or the quantity of full-time workers not surpassing 75 (www.smecorp.gov.my).

On May 2nd, 1996, the Small and Medium Development Corporation (SMIDEC) was established in Malaysia. It aims to upgrade the status of SMEs by giving several facilities to entrepreneurs, such as financial aids, consultancy services, infrastructure facilities, market penetration and other programs. Moreover, in 2004 until 2007, the strategies such as:

I.   The annual SME Integrated Plan of Action such as strengthening the enabling infrastructure, building the capacity and capability of domestic SMEs and enhancing access to financing by SMEs;

II. SMEDEC Incentive for SMEs including giving tax incentive to stimulate investment, grant assistance, loans, credit and equity participation, and infrastructure and supporting service;

III. Government Funds and Schemes for SMEs such as the SME assistance fund, the SME assistance guarantee scheme, the small debt resolution scheme and so on;

were formulated for SMEs development across all economic sectors by the National SME Development Council (NSDC). It is also to enhance the effectiveness of the implementation of SMEs improvement program in Malaysia. Then, in 2009, SMIDEC was requested to monitor the role as a centre point of reference for information and advisory service for all SMEs in Malaysia (www.smecorp.gov.my). Later, Small and Medium Enterprise Corporation Malaysia was officially renamed (Jan Khan and Khalique, 2014).

SMEs play an important role in the Malaysian economic development. The SME contribution to the Malaysian economy like Dato Dr. Zeti Akhtar Aziz said, it accounted for 99% of all business, 57% of total employment, 35% of growth domestic product (GDP) and 20% of total exports (Ibrahim and Masron, 2011). Thus, the role of the SMEs in financial advancement is noteworthy in light of the fact that it can be viewed as the spine for the country's economic growth. SMEs also provides opportunities for Bumiputera, particularly in terms of employment opportunities, improve household income and encourage training skill for entrepreneurs before they move to invest in larger companies (Zain, Anas, Hassan, Lehar and Shamsuddin, 2012). The most significant contribution of SMEs in Malaysia is in providing job opportunities. Hence, the development of SME in Malaysia will help to reduce the unemployment problem by creating job opportunities, particularly in rural areas (Kandasamy, Yoke, Yean, Ling and Wei, 2015; Katua, 2014; Kayadibi, Polat and Fidan, 2013; Madanchian, Hussein, Noordin and Taherdoost, 2015).

According to Omar, Arokiasamy and Ismail (2009) and Jan Khan and Khalique (2014), SMEs bring positive effects on a country's economic growth, but this important notion of economic growth still remains uninvestigated. Undoubtedly, SMEs have a significant contribution to the economic growth in Malaysia. Apart from providing job opportunities, the Government programs also facilitates SMEs to access in financing sources (Kandasamy et al., 2015). Many previous studies have reported that the small firms especially SMEs is facing financial difficulties such as loan accessing problem to commence their business (Khalique et al., 2011; Saleh and Ndubisi, 2006). Normally, smaller firms experience higher financial obstacles compared to large firms, due to

4

several issues such as financial institutions' scrutiny to obtain loans, the lack of financial aid program for new entrepreneurs, the lack of tangible assets for collateral purposes, and other strict requirements by banks. Thus, SMEs have to use their own funds to start their businesses (Haron et al., 2013). Consequently, many programs were developed by the Government to overcome this issue. For instance, SME Corporation had implemented 269 programs and spent MYR 6.9 billion in 2010 in an attempt to provide SMEs access to finance. Furthermore, other government agencies also provide assistance for the SME development. For instance, the Incubation & Technopreneur Development program which was implemented by the Ministry of Science, Technology and Innovation (MOSTI) in 2011. The objective of the program is to assist SMEs by providing financial support; such as loans, machinery, furniture, and non financial support; such as advice, guidance and moral supports by matching experienced international SMEs with new entrepreneur (Kandasamy et al., 2015).

The increment of various items produced by local SMEs is one of the successful signs of SMEs in Malaysia (Kayadibi et al., 2013). This encourages the public to purchase local products and indirectly support Malaysian products compared of imported products. Thus, this approach can also reduce reliance on imported products, and promoted Malaysian products export. In this light, a statistic by The SME Corporation Malaysia and Department of Statistics Malaysia shows that SMEs are forecasted to contribute to Gross Domestic Product (GDP), export and employment sector in Malaysia. Based on SME Masterplan, it is forecasted that in the year 2020, SMEs will contribute to 41% of GDP, 25% of export and 62% of employment in Malaysia. Moreover, the Malaysian SMEs had further contributed to the economic improvement such as, assisting in

5

household income distribution, introducing innovations, able to gain competitive advantage and also able to produce high quality of goods and services which are comparable with bigger companies (Kayadibi et al., 2013). Consequently, high export activities can also reduce the currency fluctuation, as the value of Malaysian currency is dropping from RM 3.8 to RM 3.9 for 1 Dollar (www.bnm.gov.my). Therefore, the establishment of SMEs in Malaysia will help to enhance economic growth because they generate income and foster profit.

SMEs also play a significant supporting role for industries. For example by providing manufactured goods that is needed by large manufacturers such as automotive, wood products, chemicals, machinery and equipment, engineering, electrical and electronics (Kayadibi et al., 2013). This indicates that both small and big firms are interdependent with each other. Consequently, upon realising the importance of the supporting role provided by SMEs, the government has tried a few endeavors to cultivate a close relationship between SMEs and large firms. This started during the Fourth Malaysia Plan (1981 to 1985) which involved Multinational Corporations (MNCs) and Government-linked Companies (GLCs) through the Ministry of International Trade and Industry (MITI). The programs were implemented to integrate small and large firms and increase productivity efficiently. Inherently, cooperation between SMEs, MNCs and GLCs are fostered through outsourcing Program, the Franchise Development Program, the Vendor Development Program (VDP), the Industrial linkage program, and the Global Supplier Program. As a result, the number of vendors has increased and government-linked companies are actively participating in the VDP program (Kayadibi et al., 2013).

The role of financing source and behaviour of SMEs should be given prior attention as this issue play an important role in the development of Malaysian economies. The SMEs have contributed significantly in the development of increasing the GDP, creating jobs and employment opportunities (Abdullah and Manan, 2011). The importance of financing behaviour to SMEs have encouraged the Government to offer initiatives through the various schemes and programs such ascredit guarantee facilities, debt resolution scheme and many more. Thus, these programs are to ensure that the financing requirements will not be a barrier for the development of the business.

The motivation of this study is to investigated SMEs financing behaviour which is bring a significant contribution to the country. However, the development and expansion of SMEs is depend on their sufficient financing and capital to run the business (Saarani and Shahadan, 2013a). Hence, to comprehend how firms finance their operations, it is necessary to examine the determinants of capital structure (either the profitability, quality of information, firm age, firm size and asset structure) will affect the financial sources decisions.

Determinants of capital structure of prior studies demonstrates that very limited amount of researchers have been conducted in certain of sectors or industries in Malaysia such as firms from financial sector like banks, insurance and finance companies because of the different accounting categories and rules governing by these firms (Haron, 2014; Hussain et al., 2015; Zabri, 2012). Therefore, this study extends the existing literature to give a deeper understanding about the financing behaviour of Malaysian SMEs.

1.2   Problem Statement

Various studies on the determinants of capital structure have been undertaken in both developing and developed countries around the world including those focusing on manufacturing companies in different countries such as India, Turkey, Italy and Pakistan (Chadha and Sharma, 2016; Chadha and Sharma, 2015; Acaravci, 2015; Muscettola, 2014; Sheikh and Wang, 2011; Zhang, 2010).

SMEs firms often face difficulty to obtain financial resources to undertake innovative projects and increase firm growth as they face a lot of difficulties in obtaining loans from financial institutions (Abe, Troilo and Batsaikhan, 2015; Cela, Shkurti and Hilaj, 2013; Daskalakis, Jarvis and Schizas, 2013; Paulet, Parnaudeau and Abdessemed, 2014). Due to such financial problem, SMEs face difficulties in expanding their businesses and consequently affect economic growth. Therefore, this study attempts to examine the factors that can affect the capital structure of SMEs in the Malaysian context.

This paper also intends to investigate how the characteristic of capital structure especially the quality of information, in this case, the use of Malaysian Financial Reporting Standard (MFRS) or Private Entity Reporting Standards (PERS) can impact firms' choice on their capital structure decision. This is because the determinants of capital structure is still an issue in Malaysia due to the lack of past studies (e.g. Haron, 2014; Hussain et al., 2015; Zabri, 2012) on this topic. In this regard, the previous studies only focused on few sectors or industries and very little study has been done in

8

manufacturing industries in Malaysian SMEs (such as Haron et al., 2013). Therefore, to provide a better understanding of financial choice (between equity and debt), this study contributes to the literature by examining the determinants of the capital structure of manufacturing firms in Malaysia.

This paper examines five characteristics of firms that can be used in determining the capital structure of Malaysian SMEs, namely quality of information, firm size, firm age, asset structure and profitability. Few studies have been done on the quality of information (in financial statements) prepared by firms. In a Belgian setting, Caneghem and Campenhout (2012) describe two formats of financial statement used by Belgian firms, namely the complete format and abbreviated format. A complete format contains full and detailed information that records all business transactions, while the abbreviated format contains only the information that are considered relevant and less items in the financial statement. Caneghem and Campenhout (2012) find that the quality of financial information is positively related to leverage. On the other hand, to the best knowledge of the researcher, no study has been undertaken in Malaysia on the relationship between quality of information in the financial statement and leverage.

Many studies have investigated about firm size as one of the capital structure characteristics. Some studies found that size does not affect firm leverage (Njeru, Namusonge and Kihoro, 2012). Other studies found a significant and positive relationship between size and leverage (Acaravci, 2015; Boateng, 2004). However, several empirical studies have reported that firm size has negative and significantly related to leverage (Hussain et al., 2015; Suhaila and Wan Mahmood, 2008). The

9

studies furthermore found a mixed relationship between firm size and leverage (Benkraiem and Gurau, 2013; Ibrahim and Masron, 2011; Kiong and Lean, 2011). Thus, the researcher need to carry out this study due to conflicting findings of past studies on the association between firm size and leverage or overall debt.

Chadha and Sharma (2015) reported that firm age has a positive and significant relationship with leverage and a recent study by Chadha and Sharma (2016) in India revealed that there are positive and significant relationship between firm age and firm value. However, there are several studies that reported that firm age has a negative significant relationship with leverage. Some researchers also argued that older firms that have strong financial resources have a tendency to have less debt (Ogbulu and Emeni, 2012; Uyar and Guzelyurt, 2015). Furthermore, Sherif and Elsayed (2013) found that the relationship between firm age and total leverage is positive. However, Abu Mouamer (2011) stated that firm age has no significant relationship with leverage. Due to the inconsistent and mixed findings, this study will try to reexamine this issue in the Malaysian context.

Asset structure comprises of tangible assets, fixed assets, current assets and any item that can be declared as valuable to the firm. The studies of Acaravci (2015), Chadha and Sharma (2015) and Zabri (2012) found that the relationship between asset structure and capital structure is positive and significant. Other findings indicated that the relationship between asset structure and leverage is positive and significant (Hussain et al., 2015; Muscettola, 2014). The studies also pointed out that the relationship between asset structure and leverage is positive (Kiong and Lean, 2011; Sherif and Elsayed,

2013). However, some studies revealed that the relationship between asset structure and debt is significant negative (Amidu, 2007; Bereźnicka, 2013; Psillaki and Daskalakis, 2009; Sheikh and Wang, 2011). Nevertheless, a few studies found that there are mixed results between asset structure and debt (Abu Mouamer, 2011; Alipour et al., 2015; Ibrahim and Masron, 2011). Due to the conflicting results, a study on the relationship between asset structure and leverage in the Malaysian context is timely needed.

Studies by Chadha and Sharma (2015), Ibrahim and Masron (2011) and Acaravci (2015), Zhang (2010) and Sherif and Elsayed (2013) reported that profitability is positively related to leverage. Similarly, Chadha and Sharma (2016) reported the relationship between profitability and leverage is positive and significant. However, several studies indicated that the relationship between profitability and leverage is negative (Fareed et al., 2014; Kiong and Lean, 2011; Psillaki and Daskalakis, 2009; Sheikh and Wang, 2011) and in some studies found this negative relationship is somewhat significant (Abeywardhana, 2015; Hussain et al., 2015; Shubita and Alsawalhah, 2012). In light of the conflicting results, it is worthwhile to reexamine this variable in the Malaysian context.

1.3   Research Question

The following research question is developed to determine the factors that influence capital structure of Malaysian SMEs:

What are the firm characteristics that affect the capital structure of Malaysian SMEs?

1.4   Research Objective

The main purpose of this study is to examine the factors that influence capital structure in Malaysian SMEs. Hence, the objective of this study is to identify the firm characteristics that affect SMEs' capital structure in Malaysia.

1.5   Scope and Limitations of the Study

The study investigates the determinants of capital structure of manufacturing industry in Malaysian SMEs. The period covered by the study is only for the year 2013 and the sample is restricted to 100 SMEs firms from the manufacturing sectors. Furthermore, this study only relies on secondary data that is SMEs annual reports for the year 2013. It is the only data available at the time of data gathering. This study used the data in 2013 because the PERS standard will last effective on 2013 and new accounting standard that is MPERS was issued on 2014 and will effective on or after January 1st 2016 (www.iasplus.com).

1.6   Organization of the Study

The rest of the study is structured as follows: Chapter 2 provides a review of previous studies and theories of capital structure. Chapter 3 explains the research methodology which covers the research framework, hypothesis development, research design, variable definition, measurement of variables, sampling, data collection procedures and techniques of data analysis. Chapter 4 discusses the findings and the analysis of data. Lastly, Chapter 5 presents the conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.0   Introduction

This chapter reviews previous studies on capital structure determinants specifically those focusing on capital structure theories and provide empirical evidence on specific factors that influence capital structure.

This chapter is divided into three sections. Section 2.1 explains the concept and theories of capital structure. Section 2.2 reviews the previous studies on specific characteristics related to capital structure determinants and lastly, section 2.3 represents the chapter summary.

2.1   An overview of capital structure theories

The study of capital structure attempts to explain the mix of securities and financing sources used by firms to finance their investment. Several detrminants have been recognized as being influential in capital structure decision and represent different arguments relating capital structure theories (Haron, 2014b). These include quality of information, firm age, firm size, asset structure and profitability. This section will explain the theories that may influence capital structure decision.

There are still ambiguities in identifying the accurate theory regarding capital structure choice. Haron (2014) argued that there is no theory that is able to, independently describe the complexity of capital structure practice. Similarly, Ahmeti and Prenaj (2015), claimed there are no proper theory of capital structure. Moreover, the current theories can just clarify certain aspects of the variety of financial structure choice despite many researchers who debated on the exact theories that are appropriate in explaining capital structure. This is due to the lack of comprehensive theory that explains firms' capital structure (Al-Ajmi, Hussain and Al-Saleh, 2009; Zabri, 2012). Therefore, prior studies have proposed several finance theories that can be applied in describing the capital structure, namely the Modigliani and Miller (MM) theory (Modigliani and Miller, 1958), the trade-off theory (Myers, 1977), pecking order theory (Myers, 1984), the agency theory (Jensen and Meckling, 1976) and the market timing theory (Baker and Wurgler, 2002).

2.1.1   Modigliani and Miller (MM) Theory

In 1958, Modigliani and Miller has published a new theory of capital structure that is known as MM theory, who suggested the theorem of irrelevance proposition. The MM proposition states that a firm's financial decision does not affect its value. It states that there are no costs involved and the market can work efficiently. However, this theory was not relevant in the real market.

15

The original proposition and the fundamental idea of MM theory states that a fully efficient market is a market that has no taxes, transactions or bankruptcy cost, and there are plentiful of information available to all parties. However, in 1963, the effects of taxes was included in MM theory model so that the theory becomes nearer to the reality (Ahmeti and Prenaj, 2015). According to this new model, firm can lower their tax payment because interest payments are deductible from tax due to the increase in a firm's value and leverage. Thus, the balancing between the increasing in leverage and decreasing in cost of capital would bring to the optimal capital structure.

However, several studies (e.g. Hussain et al., 2015; Saarani and Shahadan, 2013a) have revealed that the MM theory is ineffective under a variety of situations. This is because other costs such as taxes, transaction costs, bankruptcy costs, agency conflicts, adverse selection, lack of isolation between financing and operations and other relevant costs are not taken into consideration. In this case, the MM theory fails to suit the need of capital structure theory which considers all those conditions in the real capital market. Therefore, alternative theories have emerged from the weakness of MM theory, namely trade-off theory and pecking order theory.

2.1.2 Trade-off theory

The trade-off theory (TOT) had garnered attention in lieu of the debate on the MM theory (Jahanzeb, Bajuri, Karami and Ahmadimousaabad, 2014). The inclusion of the irrelevance theorem to tax effect had created the benefit of debt which shield the income from taxes. Consequently, the TOT proposes a parallel correlation and for

instance, it recommends the association between leverage and profitability is positive by stating that high profitable firms prefer high debt to shield the income from taxes.

According to TOT, the firms can achieve an optimal capital structure by trade off the benefit of debt finance with debt's disadvantage. Benefits of debt include tax shield, the reduction free cash flow, conflict between managers and shareholders. The disadvateges of debt includes financial distress, cost associated underinvestment and assets substitution problem (Hussain et al., 2015). According to Stretcher and Johnson (2011), this theory has two features. First, by considering tax effect; since the interest expense is tax deductible, the more debt incurred by the firm, the more wealth acquired by the firm due to the low tax payment. The firm can use the advantage of the tax shield as leverage can increase firm's value if a firm uses more debt. The second feature is the risk of increasing debt to the capital structure. In other words, the firm can take advantage of tax shield by adding more debt, but too much reliance on a large proportion of debt will bring financial distress because the firm has to meet interest payment obligations.

Moreover, the TOT emphasises that an optimal capital structure can be obtained through the trading off the costs of debt and equity against their benefits. The use of debt is one of the benefits of debt tax shield advantage. On the other hand, the costs of potential financial problems are the main disadvantage of debt, particularly when the firm are heavily relying on debt (Jahanzeb et al., 2014). Thus, to obtain an optimal capital structure, the cost of debts and benefits should be balanced consistently.

17

2.1.3 Pecking order theory

Myers (1984) proposed the pecking order theory (POT) which is slightly, in contradictions with the TOT. The POT is based on asymmetric information between insider (managers or shareholders) and outsider (investors). The asymmetric information occurs when the managers have more information than the outside parties. Moreover, the POT states that a firm will decide their financial structure based on financial hierarchy, firstly using internal fund (retained earnings), secondly using debt, and equity as a last option or/and does not consider an optimal capital structure like TOT. Thus, this theory proposes an inverse correlation where a negative correlation is proposed as high profitability firms has a tendency to reduce the amount of debt. This is because firms are capable to create their own fund before seeking for external funding and will only borrow when their retained earnings are not sufficient for profitable investment or to pay dividends (Rahman and Arifuzzaman, 2014).

In other words, the POT proposes that firms' preferences to use source of funding by using internal fund first before going to external financing for the purpose of financing their valuable project. This is consistence with Kumah (2013) in his study who posits that firms will choose to use their generated fund before seeking for external sources. Due to asymmetrical and transparency problem, SMEs have limited access to external financing, thus the POT is more applicable to SMEs (Holmes and Kent, 1991).

2.1.4   The Agency Theory

The agency costs occurred because of the use of debt in a firm's capital structure. Jensen and Meckling (1976) emphasised that agency cost arise because of internal factors such as a conflict of interest between shareholders and managers (i.e. agency cost of equity) and a conflict of interest between debt-holders and shareholders (i.e. agency costs of debt). Equity-holders captured on expected high-returned investment projects whereas debt-holders acting on behalf of principal in collecting the fixed amount of interest payment. According to Myers (2001), when there is a risk of default, the conflicts of interest between debt holders and shareholders will arise. Hence, if there is no default risk, the income, value, or risk are not able to attract the interest of debt holders and vice versa in case of the probability in default, the managers tend to have an interest of shareholders to maximise the wealth of shareholders (Sheikh and Wang, 2011) and financial distress may increase if firm taking too much debt financing (Jensen, 1976). Debt-holders should correctly predict the equity-holders' intentions as to reduce loss, because debt-holders prefer less risky projects, while equity-holders prefer the otherwise.

Agency cost arises because of conflict of interest between managers and shareholders and also due to separation management of firm and ownership. The conflicts of interest emerged when the managers tend to maximise their own interest rather than maximising the firm's value due to the increase of ownership separation and control (Dawar, 2014). In this light, managers are often attracted to invest in projects that can increase their own personal benefits rather than maximising the firm's value (Jensen,

19

1976). Consequently, the use of leverage in capital structure by issuing debt may reduce agency costs between shareholders and managers, but it can affect the future cash outflows, resulting in higher estimated cost of financial problems and insolvency (Dawar, 2014). When the leverage level is lower, increasing of debt may mitigate agency conflicts through positive incentive for managers, while at higher levels of leverage, the increase of loses in a firm's project will result in a negative net present value which can cause financial distress and bankruptcy.

The conflicts between shareholders and managers can be reduced by using debt (Jensen, 1986). The agency costs can be reduced by using debt since debt plays a significant role in monitoring managers while utilizing the available of free cash flow. Then, to discipline the managers, firms can increase the leverage. By increasing the leverage, managers are contractually obligated in paying the interest payments. The probability to adhere to the payment schedule will decrease if the managers fail to use the free cash flow efficiently. Furthermore, bankruptcy can occur in case if the managers fail to do so, and managers would lose their right in the firm (Kochhar, 1996). Therefore, it can be seen that debt plays an important role in decreasing the amount of free cash flow accessible to managers to encourage them to utilise the properties properly.

The agency theory of capital structure also emerged due to asymmetric information. Asymmetric information exists when the private information obtained by managers or insiders regarding the features of the firm's expected return investment in future either high or low return. In other words, the information asymmetry which is the part of

capital structure is created to increase the effectiveness in the firm's investment decisions which was first discussed by Myers and Majluf (1984) and Myers, (1984). Thus, the companies normally prefer internal financing over external financing while these researchers believe that the issue of equity would bring negative information to outside investors in the information asymmetrical world.

The problem of agency cost of debt might reduce the moral hazard and adverse selection problems if there is high transparency in SMEs especially in financial report disclosure (Ang, 1992). This is supported by Ang (1992) and Jensen (1976) who argued that the main of agency problem in SMEs is not the separation of ownership and management but rather between the internal and external contributors. This theory explains that the leverage of SMEs is covered by financing constraints, and this is not present in larger firms, especially in the first early years as the firm tries to survive in the industry (Burgstaller and Wagner, 2015).

2.1.5 Market timing theory

More recently, in 2002, Baker and Wurgler has recommended a theory that is known as equity market timing. This theory has a robust consequence on firm's financial behaviour. It used the market to book values of the firm to time the market and found that the changes in leverage are statistically positive and significantly related to their market timing measure. Consequently, the study concluded that this theory was the outcome of previous efforts of capital structure to time the equity market. On the other hand, this theory contends that firms will issue their equity when the stock prices

increase and repurchase their own stock when the price is low. Consequently, fluctuations in stock price will affect firms' capital structure. Equity market timing consists of two, which are; the first is the companies are allowed to issue equity directly after information is released in a rational economic decision making situation. This decreases the asymmetry problem between managers and stockholders. By decreasing the information asymmetry, it will increase the stock price which brings the opportunities for the firm to construct their own timing market. The second predicts that in the irrational economic decision situation, managers cannot successfully predict stock returns and timing the market perfectly. There is a time-varying mispricing of the stock due to irrational economic decision which managers issue equity at irrationally low price and repurchase equity at an irrationally high price. This assumption tries to say that the market timing theory is sometimes inefficient in the actual market because the managers often time the equity market by issuing either undervalued or overvalued stock as their consideration.

2.2   Determinants of capital structure

The capital structure is determined by several factors. The aim of this section is to examine the previous studies on the determinants of capital structure. Many researchers (e.g. Abor and Biekpe, 2009; Benkraiem and Gurau, 2013; Chadha and Sharma, 2015; Fareed et al., 2014; Kiong and Lean, 2011; Shubita and Alsawalhah, 2012; Uyar and Guzelyurt, 2015) have examined the relationship between firms' characteristics and leverage. The results, however, are mixed. Therefore, this study intents to discuss the following factors; quality of information, firm size, firm age,

asset structure and profitability that are most likely to affect capital structure. This section reviews and discusses the prior studies on the aforementioned variables.

2.2.1 Quality of information

Very few studies have investigated the relationship between quality of information and capital structure. A study conducted by Caneghem and Campenhout (2012) and Campenhout and Caneghem (2009) who investigated on quantity and quality of information on SME financial structure in Belgium found that high quantity and quality of information will increase the amount of leverage. However, the low information quality prevent firms from obtaining external funds, which is consistent with TOT who suggests a positive correlation between quality of information and capital structure (Caneghem and Campenhout, 2012). The firms with more information quality tend to depend more on debt, which is consistent with firms having a lower cost of obtaining external fund.

Moreover, Kardan, Salehi and Abdollahi, (2016) conducted a study on the correlation between the external financing and the financial reporting quality in Iran. The sample used was 152 listed companies covering four years period during 2010 to 2013. The study found that the quality of financial reporting is positively related with debt financing.

2.2.2 Firm size

Prior studies (e.g. Boateng, 2004; Chadha and Sharma, 2016; Saarani and Shahadan, 2013b) have used firm size in examining the determinants of capital structure. Researchers in Malaysia have found that firm size is among significant variable associated with leverage (Hussain et al., 2015; Ibrahim and Masron, 2011; Suhaila and Wan Mahmood, 2008). However, there are mixed findings on the relationship between firm size and leverage. For instance, (Saarani and Shahadan, 2013b) who investigated the determinants of capital structure of Malaysian SMEs found that firm size is insignificant and negatively related with total debt ratio and short term debt ratio, but positively related with long term debt ratio.

The TOT proposes a parallel correlation between firm size and leverage where large firms tends to increase their debt level in order to obtain an ideal capital structure. A recent study that investigated SMEs's capital structure across countries included Greek, French, Italian and Portuguese found that there is positive relationship between firm size and leverage (Psillaki and Daskalakis, 2009). Similarly, Boateng (2004) who examined the determinants of capital structure in Ghana found that the relationship between firm size and leverage is positive. Likewise, Qaderi, Rasouli, Bakmohammadi and Hamekhani (2015) who studied capital structure determinants on 68 firms listed on the Tehran Stock Exchange found that the relationship between firm size and leverage is positive. These findings showed that larger companies tend to have more debt because they are more diversified as well as more stable in cash flow, which means that they are less prone to bankruptcy.

Gomez, Rivas and Bolanos (2014) conducted a study on the capital structure determinants of in Peru. They found that there is significant and positive relationship between firm size and leverage. Similarly, Nikolaos, Nikolaos, Eleni and Dimitrios (2014) investigated the capital structure and size of SMEs in Greece and found that firm size is positively related to debt ratio, which is in line with the results of other studies (Ogbulu and Emeni, 2012; Sheikh and Wang, 2011; Sherif and Elsayed, 2013; Zhang, 2010).

Palacin-Sanchez and Ramirez-Herrera (2013) investigated the capital structure of SME across different regions in Spain. They found the relationship between firm size and debt ratio and long term debt ratio is positive. Similarly, Jõeveer (2013) examined the capital structure of small firms in Western European in 2000. The sample consisted of 481,627 firms. The study involved small and large firms, as well as listed and unlisted firms. The study found that firm size is positively related to leverage for listed and unlisted firms. Moreover, a study of the determinants of capital structure of SME in Brazilian enterprises using 19,000 Brazilian firms over 13 years of data (1994-2006) also reported a similar result (Forte, Barros and Nakamura, 2013).

However, several studies on determinants of capital structure found that the relationship between firm size and capital structure is negative (Alipour et al., 2015; Kariuki and Kamau, 2014; Masnoon and Saeed, 2014). Ibrahim and Masron (2011) who examined the capital structure and firm determinants in Malaysian SMEs found that the relationship between firm size and long term debt is negative. Similarly,

(Suhaila and Mahmood (2008) who studied capital structure in Malaysian listed companies found a similar result but firm size is significantly related to total debt.

A recent study by Hussain et al., (2015) who investigated determinants of capital structure in Malaysia found that the relationship between firm size and debt ratio is significantly negative. This is in line with the POT which contended that finance source is based on preference ranking by using information asymmetry between managers and shareholders. The POT explains that large firms have more accessibility to the equity funding source rather than small firms, therefore large firms generate greater information asymmetry to attract less debt. In other words, a negative relationship indicates that large firm tends to use less debt because the large companies will reduce the undervaluation of new equity issue and inspires the firms to finance through its equity.

However, a recent study by Uyar and Guzelyurt (2015) reported mixed results. They indicated that the relationship between firm size and short term debt is negative, but positively related with long term debt. Other studies by Benkraiem and Gurau (2013); and Saarani and Shahadan (2013b) examined the relationship of firm size with three dependent variables, namely total debt, long term debt and short term debt. These studies found that the relationship of total debt and short term debt with firm size is negative, but positively related with size and long term debt. Meanwhile, Kiong and Lean (2011) who conducted a study on capital structure of Government Linked Companies (GLCs) in Malaysia found that there is a negative relationship between size and the debt ratio for GLCs but positively for non GLCs.

26

Similarly, previous studies on capital structure of Malaysian SMEs showed mixed results. For example, a study done by Ibrahim and Masron (2011) found that the relationship between firm size and long term debt is significant. In contrast, Zabri (2012) found that the relationship between firm size and capital structure is not significant. Furthermore, Saarani and Shahadan (2013b) also reported that size is not significantly related with all debt level but negatively related with total debt ratio and short term debt, and positively related with long term debt ratio.The mixed results showed that the association of size in measuring capital structure is still inconclusive. Hence, this present study will reexamine this issue in the context of Malaysian SMEs.

2.2.3   Firm age

There is theoretical ambiguity regarding the actual relationship between firm's age and leverage (Ahmad and Wan Aris, 2015). Some theories (TOT) contended that age and debt financing are positively correlated, and some theories (POT) postulated a negative relationship. Ahmad and Wan Aris (2015) investigated the relationship between firm age and capital structure. They found that age is negatively related to all debt ratio measurements. Similarly, Caneghem and Campenhout (2012) reported that the relationship between firm age and leverage is negative. Viviani (2008) who conducted a study on capital structure determinants indicated that the relationship between firm age and short term debt is negative. Those results are in line with POT which postulates that managers normally have a financing decision hierarchy regarding the preference of financing sources. Normally they will use retained earnings before deciding to go for external financing. This implies that companies tend to use less debt

27

since they have been in the industry for a long period of time, implying that the companies are able to accumulate their own fund. Thus, it will reduce the reliance on external debt. In addition, Ezeoha and Botha (2012) argued that the level of debt financing declines as a firm getting older. This is because the older firm may face the problem with asset depreciation, which may erode the company value, and finally affecting the company's growth.

Uyar and Guzelyurt (2015) examined the influence of firm characteristics on capital structure in Turkey and reported that the relationship between firm age and long term debt is negative and significant. This result is supported by Ogbulu and Emeni (2012) and Ari and Mika (2004) who found similar findings.

Furthermore, Palacin-Sanchez and Ramirez-Herrera (2013) investigated the determinants of capital structure of SMEs across different regions in Spain. Their sample consisted of 13,838 SMEs and studied a period of over 4 years (2004 to 2007). They found that firm age is significant to all debt level measurement and the relationship between firm age and debt ratio and long term debt ratio is negative.

Forte et al., (2013) studied the determinants of capital structure of Brazilian SMEs using 19,000 Brazilian firms over 13 years of data (1994-2006) and found that the relationship between firm age and leverage is negative.

Thus, a positive relationship between firm age and leverage was proposed by TOT. According to this theory, an optimal capital structure is achieved when older firm tends

to increase levels of debt in order to increase the quality of firm value. Furthermore, older firms can obtain debt easier due to the good relationship they have with lenders as shown by Chadha and Sharma (2016) who conducted an empirical study on capital structure in India. They found that the relationship between firm age and firm value is positive and significant.

Kumar and Rao (2016) studied the financing pattern of SMEs in India. The sample consisted of 1,524 of SMEs over the period between 2006-2013. The study analyzed the financial ratios of SMEs and the components of debt and found a negative relationship between firm age and leverage.

Inherently, firm age has a significant impact on capital structure. This is in line with Chadha and Sharma (2015) who studied the determinants of capital structure in India, using a sample of 422 manufacturing companies covering ten years period (2003 – 2013) and found that firm age have a positive significant relationship with leverage. This finding was supported by Sanusi (2014) and Zare, Farzanfar and Boroumand (2013) who found similar findings. Similarly, Sherif and Elsayed (2013) examined the influence of corporate characteristics on capital structure in Egyptian insurance companies and found that there is a positive relationship between firm age and leverage.

In contrast, several studies contended that firm age have no influence on capital structure. Previous studies by Abu Mouamer (2011), Zabri (2012) and Zhang (2010) on

29

determinants of capital structure indicated that there is no significant impact of firm age on leverage.

Furthermore, there were also studies that reported mixed results between firm age and capital structure. Saarani and Shahadan (2013b) examined the determinants of capital structure in Malaysia, using a sample of 334 SMEs firms which covered the period from 2005 to 2009. They found a negative relationship between firm age and total debt and long term debt but positively related to short term debt. Another study by Saarani and Shahadan (2013a) who investigated the comparison of capital structure between SMEs and large firms in Malaysia found that there is significant and negatively relationship between age and with long term debt ratio. However, Abdullah and Manan (2011) who investigated Malaysian SMEs' financing pattern, found that the relationship between age and capital structure is not significant. This finding was supported by Zabri (2012) who also found a similar result.

2.2.4   Asset structure

Previous researchers have discovered mix findings on the impact of asset structure on leverage. For example, a recent study conducted by Alipour et al., (2015) on the determinants of capital structure of non-financial firms in Iran found a mixed finding between asset structure and leverage. This result generally confirms that Iranian companies try to funding their fixed asset with long- term debts and their current assets with short term debts. Abor and Biekpe (2009) study on capital structure in Ghana also found a mixed result. The study found a significant and positive relationship between

30

asset structure and long term debt but negatively related with short term debt. The results were varied based on the type of debt undertaken for each study. However, another study by Ogbulu and Emeni (2012) on the determinants of corporate capital structure in Nigeria found that there is no impact of asset structure on leverage.

On the other hand, some studies found a positive and significantly influence of asset structure on leverage. Chadha and Sharma (2015) performed an empirical study on capital structure determinants in India. They found that the relationship between asset structure and leverage was positive and statistically significant. Their result also supported previous studies by Sanusi (2014) and Zabri (2012) who found similar results.

The TOT contends that there is a positive relationship between asset structure and leverage. According to Myers and Majluf (1984), firms that hold more assets tend to have high leverage due to collateral advantage. Normally, firms with a lot of tangible assets can obtain financial aid easier as their tangible asset can be used as collateral. This argument is supported by several recent studies that found the relationship between asset tangibility and leverage is positive (Gomez et al., 2014; Hussain et al., 2015; Kariuki and Kamau, 2014; Memon, Rus and Ghazali, 2015; Muscettola, 2014; Qaderi et al., 2015; Ukaegbu and Oino, 2014).

In addition, Sherif and Elsayed (2013) and Ramjee and Gwatidzo (2012) performed a study on capital structure in Egypt and Africa, respectively and found that asset tangibility is positively related to leverage. Similarly, other researchers also found

similar results (e.g. Abu Mouamer, 2011; Chiang, Cheng and Lam, 2010; Omran and Pointon, 2009; Zhang, 2010).

Palacin-Sanchez and Ramirez-Herrera (2013) investigated the capital structure of SMEs and its determinants across regions in Spain. Their sample consisted of 13,838 SMEs over 4 years period (2004 2007). They found that the asset structure is significant to all debt level measurements, and assets structure is positively related with long term debt ratio and negatively related with short term debt ratio. Meanwhile, Jo˜eveer, (2013) studied the capital structure of small firms in Western European countries. The sample consisted of 481,627 firms in year 2000. The study is based on small and large firms, as well as listed and unlisted firms. The study found that assets structure has positive relationship with leverage for unlisted firms.

A study on determinants of capital structure of SME in Brazilian enterprises by using data from19,000 Brazilian firms over 13 years (1994-2006) also reported a similar result (Forte et al., 2013). However, Kumar and Rao (2016) investigate the financing pattern of SMEs in India involving 1,524 SMEs over the period of 2006-2013. The study analyzed the financial ratios of SMEs and the characteristics of debt and found that assets tangibility has a negative relationship with young SMEs while positively related to old SMEs. The above studies showed that tangible asset plays a crucial role in firm accessibility to increase debt and it also can be used for collateral purposes.

However, the POT proposes that tangibility is negatively related with leverage. This theory states that a firm tends to use less debt if they have high tangible asset, as they

32

prefer internal funding rather than external debt as their last resort. This theory is supported by several studies that found asset tangibility is negatively related with leverage (Bereźnicka, 2013; Masnoon and Saeed, 2014; Psillaki and Daskalakis, 2009; Saarani and Shahadan, 2013b).

Dong (2012) conducted an empirical study on capital structure decision in small economy in New Zealand and found that asset structure is negatively related with leverage. Other studies that investigated capital structure determinants also reported similar findings (Al-Ajmi et al., 2009; Amidu, 2007; Ibrahim and Masron, 2011; Sheikh and Wang, 2011).

In the case of capital structure in Malaysian SMEs, some researchers found positive and significant relationship between asset structure and leverage (such as Zabri, 2012). Furthermore, Saarani and Shahadan (2013a) found that there is significantly positively relationship between asset structure and long term debt ratio but negatively related with short term debt ratio. However, Abdullah and Manan (2011) in their study on SMEs and financial patterns in Malaysia found that asset structure have no significant impact on capital structure.

2.2.5 Profitability

Numerous studies have investigated the correlation between leverage and profitability. In order to explain the relationship between this variable, the use of POT is proposed. This theory recommends that profitability has negative relationship with leverage, where firms with a higher profitability less rely on external debt financing. The firm prefer on internal fund for the first ranking, followed by debt financing and new equity issuance as the last choice. Many recent studies have found profitability have a negative relationship with leverage (Abeywardhana, 2015; Ahmad and Wan Aris, 2015; Amidu, 2007; Gomez et al., 2014; Hussain et al., 2015; Kariuki and Kamau, 2014; Masnoon and Saeed, 2014; Psillaki and Daskalakis, 2009; Ramjee and Gwatidzo, 2012; Ukaegbu and Oino, 2014). These studies investigated the capital structure determinants in different countries and reported that profitability is negatively related with capital structure. Furthermore, several studies that investigated the relationship between profitability and capital structure also found negative results (Fareed et al., 2014; Kiong and Lean, 2011; Nikolaos et al., 2014; Sheikh and Wang, 2011; Shubita and Alsawalhah, 2012; Thomas, Kiptanui, Chenuos and Biwott, 2014; Velnampy and Niresh, 2012).

An empirical study of capital structure determinants in France SMEs done by Benkraiem and Gurau (2013) showed that the relationship between profitability and short term debt is negative, as well as a study on capital structure that include the zakat environment in Saudi Arabia which showed a similar result (Al-Ajmi et al., 2009).

34

A study done by Palacin-Sanchez and Ramirez-Herrera (2013), investigated the capital structure of SMEs and its determinants across different regions in Spain. Their sample consisted of 13,838 SMEs over 4 years period (2004 2007). They found that profitability is significant and negatively related with all debt level measurement. Furthermore, a study on the determinants of capital structure of SME in Brazilian enterprises used data from 19,000 Brazilian firms over 13 years period (1994-2006) also reported that profitability is negatively related with leverage (Forte et al., 2013). This is further supported by Kumar and Rao (2016) and Yazdanfar and Öhman, (2015) who studied capital structure in India and Sweden respectively. Their finding reported similar results.

In Malaysian context, a study on capital structure of SMEs firms found that profitability is statistically significant only for short term debt (Saarani and Shahadan, 2013a). This is in line with Ibrahim and Masron (2011) who found that the profitability have significant and positive on long term debt. In contrast, Zabri (2012) found that profitability has no significant impact on capital structure.

Qaderi et al., (2015) investigated firm specific factors on capital structure in Iran and reported a profitability is positively related with capital structure, but have no significant impact on capital structure. Thus, few studies indicated that there is no significant impact between profitability and capital structure (Fosberg, 2006; Ogbulu and Emeni, 2012; Ooi, 1999; Zabri, 2012). However, there also studies regarding the capital structure determinants that indicated a positive and significant relationship between profitability and leverage (Chadha and Sharma, 2015; Acaravci, 2015).

In contrast, the TOT proposes that profitability is positively related to leverage. According to this theory, firms with a higher profitability should increase their level of leverage. This is because the firms are trying to optimise their capital structure by balancing between costs and benefits. A recent study on capital structure in India by Chadha and Sharma (2016) used 422 samples of manufacturing companies covering 10 years from 2003 to 2013 and found that profitability is positively and significantly related to firm value. Furthermore, Liang, Li and Song, (2014) examined the capital structure in China found that there is positive the relationship between profitability and leverage. This is supported by Sherif and Elsayed (2013) and Zhang (2010) that reported a similar result. Similarly, Ibrahim and Masron (2011) found a similar result.

Abor (2005) examined the impact of capital structure on profitability found a mixed result between ROE and total debt, short term debt and long term debt. The study was conducted in Ghana to investigate the association between capital structure and profitability covering five periods from 1998 to 2002. The result showed that there is positive relationship between ROE and short term debt and total debt, but negatively related to long term debt.

2.3   Chapter Summary

This chapter reviews the previous studies on capital structure. First, it explains the theories of capital structure such as MM theory, TOT, POT, agency theory and market timing theory. Second, this chapter investigates the influence of firm characteristics (quality of information, profitability, firm size, asset structure and firm age) on capital structure decisions. Finally, this chapter also summarised the empirical evidence based on capital structure theories.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0   Introduction

Useful information from various sources is obtained in order to conduct this research. Since the data collected are secondary in nature, the financial information was obtained from the Companies Commission of Malaysia (CCM) website. The sources are from printed and electronic bases. Examples of printed information are books, journals and research report. Other electronic sources include online journal articles and annual reports retrieved from CCM website.

This chapter consists of eight different sections. Section 3.1 presents the research framework. Section 3.2 explains the hypothesis development. Section 3.3 describes the research design. Section 3.4 discusses the definition and measurement of variables. Section 3.5 discusses the data collection method and sampling. Section 3.6 presents the data collection procedures. Section 3.7 represents the techniques of data analysis. Section 3.8 concludes this chapter.

3.1 Research Framework

Figure 3.1   Research Framework

INDEPENDENT VARIABLES   DEPENDENT VARIABLE

QUALITY OF
INFORMATION (QUAL)

FIRM SIZE (SIZE)

                                              LEVERAGE (LEV):

FIRM AGE (AGE)   DEBT RATIO

ASSET STRUCTURE
(AS)

PROFITABILITY (PROF)

3.2 Hypothesis Development

The study of the association between capital structure and firm specific characteristics leads to the development of five hypotheses as follows:

3.2.1 Quality of information (QUAL)

According to the TOT as proposed by Myers (1977), in order to gain an optimal capital structure, firms will raise debt as much as they can. In this study, the quality of information is based on the accounting standard adopted by SMEs which is either the [1]PERS or MFRS. Firms that adopt MFRS are considered as having a higher quality of information because MFRS demands a higher level of disclosure of information. There are fourty-four accounting standards that SMEs need to comply if they choose to adopt MFRS, whereas PERS only require firms to comply with twenty-nine accounting standards. Accordingly, certain Malaysian SMEs disclose the complete format (MFRS) of the FS (and provide the same amount of information as large Malaysian firms) and other Malaysian SMEs file the old format (PERS) of the FS (and therefore provide less information). Importantly, regardless of the FS format used, the firm is obliged to provide all information contained in that type of format. Thus, based on the format of the FS filed, one is able to test the impact of information quality on SME financial structure. Although FS capture only one aspect of a firm's disclosure policy, ''financial statements are one of the most important means by which unlisted firms communicate

---

[1] PERS standards were introduced by MASB in 2006 and were replaced by new accounting that is MPERS effective on or after 1st January 2016.

the status of their business to outside stakeholders.'' (Beuselinck et al. 2008, p. 616). The first study to use information quantity and quality as the determinants of leverage was conducted by Caneghem and Campenhout (2012). Using Belgian SMEs, they found that both the quantity and quality of financial information are positively related to leverage. Their results is in line with TOT which stated that the firm will face the problem of using external funds if their financial statement contain less information and low information quality, or firm with high quality of information relies more heavily on debts. Hence, it is worthwhile to test whether their findings are applicable in the Malaysian context. Based on the results found from previous empirical studies, a positive relationship between quality of information and leverage is expected. Therefore, this study hypothesised that:

H1: Quality of information is positively related to firm leverage.

3.2.2 Firm size (SIZE)

The TOT assumes that bigger firms have a greater debt accessibility and are able to be highly levered, and was less prone to financial distress because of their stable financial sources. Psillaki et al., (2016) pointed that larger firms with higher debt capability are highly levered. Thus, a positive relationship is predicted between firm size and leverage as evidenced from prior studies (Boateng, 2004; Fahmi and Noryati, 2013; Mazila et al., 2013; Chadha and Sharma, 2016; Gomez et al., 2014; Nikolaos et al., 2014; Ogbulu and Emeni, 2012; Psillaki and Daskalakis, 2009; Qaderi et al., 2015; Sheikh and Wang, 2011; Sherif and Elsayed, 2013; Thomas, Kiptanui et al., 2014; Zhang, 2010). However, there are researchers who found a negative relationship

41

between firm size and leverage (such as Alipour et al., 2015; Ibrahim and Masron, 2011; Kariuki and Kamau, 2014; Masnoon and Saeed, 2014; Suhaila and Mahmood, 2008). Based on the results found by the majority of empirical studies, a positive relationship between firm size and leverage is expected. Therefore, this study hypothesised that:

H2: Firm size is positively related to firm leverage.

3.2.3   Firm age (AGE)

Firm age can be described as how long an organisation has been in operation since their establishment. Ahmad and Wan Aris (2015) stated those firms that have been in the industry for a long period tend to use less debt. It means that the firm has an ability to accumulate its internal funds which encourage the firm to reduce its reliance on debt. The firms which prefer to use internal equity as a first choice before seeking to external sources of debt or new equity which is in line with the POT. Thus, firm age is predicted to be negatively related to leverage (Ahmad and Wan Aris, 2015; Ari and Mika, 2004; Ogbulu and Emeni, 2012; Uyar and Guzelyurt, 2015). However, a few studies found that firm age were positively related to leverage (Chadha and Sharma, 2016; Sherif and Elsayed, 2013). Based on the results found by the majority of empirical studies, a negative relationship between firm age and leverage is expected. Therefore, this study hypothesised that:

H3: Firm age is negatively related to firm leverage.

3.2.4 Asset structure (AS)

The other important factor that determine the capital structure is asset structure. Asset structure represents the items contained in the balance sheet which comprises of current assets and fixed assets. Numerous studies used tangibility asset as proxies to measure capital structure (such as Ibrahim and Masron, 2011; Masnoon and Saeed, 2014; Qaderi et al., 2015; Sherif and Elsayed, 2013). Gill, Biger, Pai and Bhutani (2009) pointed that firms will use more debt rather than to issue new equity if they have more collateral assets. This was supported by Ezeoha and Botha (2012) who conducted a study about debt financing in South Africa. They found that the higher the proportion of firms' tangible assets, the higher is their reliance on debt. In contrast, Jo~eveer, (2013) contended that when a firm has low tangible asset it will be more levered. Therefore, a positive relationship between asset structure and leverage is found (Gomez et al., 2014; Kariuki and Kamau, 2014; Memon et al., 2015; Muscettola, 2014; Qaderi et al., 2015; Sherif and Elsayed, 2013; Zhang, 2010). However, there are some researchers who found a negative relationship between asset structure and leverage (Amidu, 2007; Bereźnicka, 2013; Ibrahim and Masron, 2011; Masnoon and Saeed, 2014; Nikolaos et al., 2014; Psillaki and Daskalakis, 2009; Sheikh and Wang, 2011). Based on the results found by the majority of empirical studies, a positive relationship between asset structure and leverage is expected. Therefore, this study hypothesised that:

H4: Asset structure is positively related to firm leverage.

3.2.5   Profitability (PROF)

Profitability also plays an important factor that can influence the level of a firm leverage. Kiong and Lean (2011) pointed that a highly profitable firm is expected to reduce its debt. This is in line with POT which states that a firm would prefer to use internal capital source when there is an improved profitability rather than using external capital sources. Hence, there is a negative relationship between profitability and leverage (Abeywardhana, 2015; Ahmad and Wan Aris, 2015; Benkraiem and Gurau, 2013; Gomez et al., 2014; Hussain et al., 2015; Kariuki and Kamau, 2014; Kiong and Lean, 2011; Masnoon and Saeed, 2014; Nikolaos et al., 2014; Psillaki and Daskalakis, 2009; Sheikh and Wang, 2011; Shubita and Alsawalhah, 2012; Thomas, Kiptanui et al., 2014; Velnampy and Niresh, 2012). However, some studies found a positive relationship between profitability and leverage (Chadha and Sharma, 2016; Ibrahim and Masron, 2011; Qaderi et al., 2015; Sherif and Elsayed, 2013; Zhang, 2010). Based on the results found by the majority of empirical studies, it is expected that there will be a negative relationship between profitability and leverage. Therefore, this study hypothesised that:

H5: Profitability is negatively related to firm leverage.

3.3   Research Methodology

The research design consists of four sections. The first section elaborates the definition and measurement of all the variables used in the study. The second section describes the data collection and sampling method. The third section discusses the data collection procedures, and the final section elaborates the techniques of data analysis.

3.4   Definition and Measurement of Variables

Basically, this study examines two types of variables, namely; one dependent variable, and five independent variables. The explanation for all the variables are as outlined below:

3.4.1   Dependent variable

Most of the prior studies used total debt, long term debt, short term debt and debt ratio as a proxy to measure leverage of the firm (Abor, 2005; Ahmad and Wan Aris, 2015; Alipour et al., 2015; Benkraiem and Gurau, 2013; Ibrahim and Masron, 2011; Sheikh and Wang, 2011). The dependent variable for this study was measured by using debt ratio. The formula is:

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

3.4.2 Independent Variables

This study used five independent variables, namely quality of information (QUAL), firm size (SIZE), firm age (AGE), asset structure (AS) and profitability (PROF). These variables were calculated in order to test the hypothesis developed earlier. The information about these variables were taken from each firm's annual report for the year 2013.

The quality of information refers to how much publicly available financial information can be accessed by interested user particularly for decision making purpose. Malaysian SMEs has the option to prepare their financial statement using two formats, namely the old accounting standards (PERS) or the new accounting standards (MFRS). MFRS contains a higher number of accounting standards which require a full and detailed information that reports all characteristics of business transactions in preparing financial statement, while PERS contains a lesser number of accounting standards which generally have a less detailed information or items in the financial statement. The quality of information is measured using a dummy variable which take a value of 1 if the firm filed its financial statement using MFRS, and 0 if the firm filed its financial statement using PERS.

Firm size refers to the speed and growth of business that can expand its activities in the long term period. Firm size can be measured using a number of full time employees, total assets and annual sales. Some studies use total assets (such as Ibrahim and Masron 2011) or natural log of the firm's total assets (Abeywardhana, 2015; Ahmad

46

and Wan Aris, 2015; Alipour et al., 2015; Benkraiem and Gurau, 2013; Kariuki and Kamau, 2014). Some researchers used log of total sales (Abor, 2005; Kiong and Lean, 2011; Sheikh and Wang, 2011). This study used the natural logarithm of total assets for the variable firm size as its measurement.

Firm age represents the years of firm's formation or listing in incorporation for a certain period (Ezeoha and Botha, 2012). The proxies used to measure firm's age is either based on firm number of years of establishment from the date of incorporation or from the date of listing in a stock exchange (Ahmad and Wan Aris, 2015; Sherif and Elsayed, 2013; Zabri, 2012; Zhang, 2010). However, this study used the natural logarithm for the number of years since firm's incorporation of the firm as a proxy to measure firm age.

Asset structure is an important factor that can influence capital structure. The tangible assets can have an impact on the collateral value of debt financing. Collateral value is used as a collective term that refers to the sum of investment in fixed assets, inventories and other intangible assets (Ezeoha and Botha, 2012). In this light, asset structure can be measured by using tangible assets (total fixed assets divided by total assets) (Ahmad and Wan Aris, 2015; Alipour et al., 2015; Benkraiem and Gurau, 2013; Sheikh and Wang, 2011; Zabri, 2012; Zhang, 2010). Therefore, in this study, total fixed assets divided by total assets were used to measure asset structure.

Profitability can be expressed as the firm's profit or gain that represents the performance of a firm (Masnoon and Saeed, 2014). It is also one of the features that

47

can affect firm's capital structure. There are several measurements of profitability, such as profit margin, return on asset (ROA), the ratio of net profit before taxes to total assets, return on equity (ROE), profit before taxation and etc. The most widely used measurement for profitability is the return on asset (Alipour et al., 2015; Benkraiem and Gurau, 2013; Ibrahim and Masron, 2011; Kariuki and Kamau, 2014; Zabri, 2012). As such, return on assets (ROA) was used as the measurement of profitability variable in this study.

The measurement of variables is summarised as shown in Table 3.1.

Table 3.1 Measurement of Variables

Variable	Measurement
Leverage (LEV)	Debt ratio = Total liabilities / Total assets
Quantity of information (QUAL)	Dummy variable: • Value of 1 if a firm uses the new accounting standards (MFRS) • Value of 0 if a firm uses the old accounting standards (PERS)
Firm size (SIZE)	Natural logarithm of total assets
Firm age (AGE)	Natural logarithm of the number of years since incorporation of the firm
Asset structure (AS)	Total fixed assets / Total assets
Profitability (PROF)	ROA (Return on Total assets) = EBIT / Total assets

3.5   Data Collection Method and Sampling

The quantitative method was used for data collection in this study. The study collected data through secondary source, namely the companies annual reports which were

retrieved from the CCM website. The data consisted of 100 annual reports of Malaysian SME companies in the manufacturing industry for the year 2013. This study choose manufacturing industry because the objectives of this study is to investigate the determinants of capital structure of the firms in manufacturing sector in Malaysian SMEs. The study also wants to analyse how firms in the manufacturing sector raise capital for investments, internally or externally (with debt, equity, or debt to repurchase equity). Their contributions to the overall value added by SMEs to the Malaysian economy was 96% for the manufacturing sector. In terms of employment, small and medium-sized-sized of SMEs are found to provide the biggest number of employment in the country with a total of 93.7% in the manufacturing sector (Mohamed Zabri, 2013). The data collected from the annual reports were the total liabilities, return on asset (ROA), total assets, revenue, earnings before interest and tax (EBIT), and the number of years since incorporation of the firm.

The sample criterion was to include only selected firms in the manufacturing sector which are available on CCM website. In this regard, in Malaysia, there are 39,669 manufacturing companies listed in the CCM website (Economic / SME Census 2011 by Department of Statistics, Malaysia), and the firms were selected randomly for this study. This study were selected randomly because: first, (i) SME firms are not compulsory to disclose their financial report and not subject to Securities and Exchange Commissions' public disclosure regulations. Thus, this will cause the adversity to obtain data. Second, (ii) some SMEs often do not have audited their financial statement therefore their financial standings are not disclosed. This might cause less transparency or reliability of the value reported (Ab Manan, Othman, and

49

Shahadan, 2011). The main criteria used for sampling the firm are: (i) the company's annual report must be available at CCM or company website and (ii) the chosen variables must be available in the annual reports of the selected companies. Consequently, the researcher has excluded firms that did not exist on CCM website.

This study used 100 manufacturing firms as sample size. According to Sekaran (2003), sample size larger than 30 and less than 500 are appropriate for most research. Therefore, the sample size of this study is quite acceptable and comparable with the samples used in most other studies of capital structure (such as Bubic and Susak, 2015; Ogbulu and Emeni, 2012) with sample size of 96 and 110 respectively.

3.6 Data Collection Procedures

The data were gathered from the selected companies' annual reports for the year 2013 using English language version, which are available through the CCM website. The annual reports provide the latest source of information, for the entire sample, at the time of the study.

3.7 Techniques of Data Analysis

This study used cross sectional data analysis because data were collected from a large cross section of the population in the same period of time or the data consists of sample

across firms. The data for this study were analyzed and explained through (i) descriptive statistics analysis, (ii) correlation analysis, and (iii) regression analysis. The details of all the analysis were explained in the subsequent sections of this chapter.

3.7.1 Descriptive Statistics

Zikmund, Babin, Carr and Griffin (2013) stated that descriptive analysis is the fundamental conversion of data that presents the basic characteristics of a subject (e.g. mean, standard deviation, minimum and maximum). Furthermore, the use of descriptive statistics is to summarise the data and to describe the general observation about the data collected from all the sampled firms.

3.7.2 Correlation analysis

A correlation analysis refers to the relationship between two variables, namely the dependent and independent variables. It is a numerical summary that measures the strength of the relationship between two variables and can differ between a perfect positive correlation (+1) to a perfect negative correlation (-1). A value approaching 0 indicates that there is no relationship between the variables (Zikmund et al., 2013). Thus, the correlation coefficient is important to determine the association and correlation between a dependent variable such as leverage and independent variables such as quality of information, size, age, asset structure and profitability.

3.7.3 Regression analysis

Regression analysis is another technique for evaluating the linear association between a dependent variable and independent variables. Although simple regression and correlation are mathematically corresponding in most aspects, regression is a dependent technique while correlation is an interdependent technique. A dependent technique makes a difference between dependent and independent variables, and require a cause and effect analysis. Meanwhile, an interdependent technique does not make this distinction and is fundamentally concerned with how the variables relate to one another (Zikmund et al., 2013).

Regression Model:

The regression analysis was conducted to determine the influence between quality of information, size, age, asset structure and profitability with leverage. The regression model is as follows:

$$LEV = \beta_0 + \beta_1 (QUAL) + \beta_2 (SIZE) + \beta_3 (AGE) + \beta_4 (AS) + \beta_5 (PROF) + \varepsilon$$

Where:

β_0 = Constant

LEV = Leverage

QUAL = Quality of information

SIZE = Firm size

AGE = Firm age

AS = Asset structure

PROF = Profitability

Ɛ = Error term

3.8   Chapter Summary

This chapter summarised the data collection method and techniques, research design, definition and measurement of variables, theoretical framework and hypotheses developed. It is believed that the flow process of the methodology must be done systematically and orderly without missing any small details of the research method employed in order to make this analysis valid and reliable.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0   Introduction

This chapter discusses the research findings of the study. This chapter consists of five sections. Section 4.1 provides the descriptive statistics of the data set that show the mean, standard deviation, minimum and maximum values. Section 4.2 discusses the Pearson correlation coefficient among variables. Section 4.3 discusses the Multiple Regression analysis which shows the significant and insignificant variables. Section 4.4 discusses the hypothesis testing and finally, section 4.5 summarises the chapter.

4.1   Descriptive statistics

Table 4.1 Descriptive statistics

Panel A: dependent and independent variables (n = 100 firms)						
Variable	**Mean**	**SD**	**Min.**	**Max.**	**Skew.**	**Kurt.**
Leverage (LEV)	0.932	2.273	0.04	21.70	8.080	72.197

Quality of information (QUAL)	0.310	0.464	0.00	1.00	0.834	-1.331
Firm size (SIZE)	16.020	1.911	11.29	20.27	0.212	-0.397
Firm age (AGE)	3.047	0.563	1.79	4.58	0.029	0.079
Asset structure (AS)	0.5604	0.274	0.07	1.39	0.155	-0.197
Profitability (PROF)	0.0310	0.225	-1.60	0.49	-4.239	29.654

Panel B: dichotomous (Dummy) Variable (n = 100 firms)

Variable	N = 0	N = 1
Quality of information (QUAL)	69 (69%)	31 (31%)

Note: Leverage (LEV) is total liabilities/total assets; Quality of information (QUAL) is dummy variable that takes a value of 1 if a firm use the complete format of FS (MFRS) and 0 otherwise; Firm size (SIZE) is natural logarithm of total assets; Firm age (AGE) is natural logarithm of the number of years since incorporation of the firm; Asset structure (AS) is tangibility assets (net fixed assets + inventory) / total assets; profitability is ROA (return on total assets = EBIT/total assets)

Zikmund et al., (2013) noted that descriptive statistics presents the pattern and general trends of a data set. Table 4.1 presents a summary of descriptive statistics for the all variables employed in the study. It shows the mean, standard deviation, minimum and maximum values. Leverage (LEV), which is the dependent variable shows a mean value of 93%. The maximum level of leverage is 2170% and the minimum level is 4%. The maximum leverage of 2170% shows that some SMEs in our sample (12 companies) have large retained losses on their balance sheet (i.e. negative equity).

For the independent variables, the mean value for firm size (SIZE) shows the highest mean value of 16.02, with minimum and maximum values of 11 and 20, respectively. Firm age (AGE) is the second highest variable with a mean value of 3.05, with minimum and maximum ages of 1.8 and 5, respectively. Profitability (PROF) shows a mean value 3%, and with minimum and maximum values of -160% and 49%, respectively. The mean value of 3% is comparable to the one reported by Caneghem and Campenhout (2012) for Belgian firms. This finding is consistent with Benkraiem and Gurau (2013)

who argued that SMEs with high profitability tend to finance their firm's activities by using their own funds. With respect to asset structure (AS), on average, tangible assets represent about 56% of total assets, with minimum and maximum values of 7% and 139%, respectively. The mean value is slightly higher than those reported in previous studies (e.g. Caneghem and Campenhout, 2012; Heyman, Deloof and Ooghe, 2008; Sogorb-Mira, 2005). For the quality of information (QUAL), 31% of the SMEs filed their financial statements using the new accounting standards (MFRS).

Overall, the mean value of leverage was 93%, which indicates that the most important source of fund for Malaysian SME firms is derived from debt. From this result, the higher leverage (LEV) ratio of Malaysian SME shows that they rely heavily on debt. The mean value is higher than those reported by Alipour et al., (2015) in Iran, Sheikh and Wang (2011) in Pakistan, and Caneghem and Campenhout (2012) in Belgium who reported leverage values of 72.5% and 60.78% and 71% respectively.

4.2   Correlation Coefficients

Table 4.2 Correlation Coefficients

		LEV	QUAL	SIZE	AGE	AS	PROF
LEV	Pearson Correlation	1					
	Sig. (1-tailed)						
QUAL	Pearson Correlation	-0.161	1				
	Sig. (1-tailed)	0.055					
SIZE	Pearson Correlation	-0.339**	0.784**	1			
	Sig. (1-tailed)	0.000	0.000				
AGE	Pearson Correlation	-0.105	0.240**	0.418**	1		
	Sig. (1-tailed)	0.149	0.008	0.000			

AS	Pearson Correlation	-0.097	0.067	0.107	0.011	1	
	Sig. (1-tailed)	0.168	0.253	0.145	0.457		
PROF	Pearson Correlation	-0.331**	0.034	0.151	0.036	-0.131	1
	Sig. (1-tailed)	0.000	0.367	0.067	0.361	0.097	

Leverage (LEV) total liabilities/total assets; Asset structure (AS) is tangibility assets (net fixed assets + inventory) / total assets; profitability (PROF) is ROA (return on total assets = EBIT/total assets); QUAL (quality of information) is dummy variable that takes a value of 1 if a firm use the complete format of FS (MFRS) and 0 otherwise; SIZE (Firm size) is natural logarithm of total assets; AGE (Firm age) is natural logarithm of the number of years since incorporation of the firm;

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

The most persuasive statistical tools used in this study to analyse data are known as correlation analysis which measures the relationship between two variables. In this case, a Pearson's correlation was used to examine the relationship between leverage and all the independent variables. As shown in Table 4.2, firm's size (SIZE) is negatively correlated with leverage (LEV) with a moderate value of correlation (-0.339). The significant negative correlation between firm's size and leverage indicates that firms with less assets tend to borrow more fund to run their daily operation. This result is in line with previous studies such as Alipour et al., (2015) and Kariuki and Kamau (2014) who also found that firm's size and leverage have a negative relationship.

However, leverage (LEV) is negatively and insignificantly correlated with asset structure (AS) which is inconsistent with H4. This negative correlation is supported by previous studies such as by Psillaki et al., (2016) and Saarani and Shahadan (2013b). However, the finding is inconsistent with other studies (such as Kariuki and Kamau, 2014; Muscettola, 2014; Qaderi et al., 2015) which showed a positive correlation between asset structure and leverage.

The same applies to firm age (AGE) which is not significantly correlated with leverage (LEV), opposite of the hypothesised direction. This result is inconsistent with the studies by Uyar & Guzelyurt (2015) and Campenhout & Caneghem (2009) who reported a negative and significant correlation between firm's age and leverage. This indicates that the older firms in the industry tend to use less debt (Ahmad and Wan Aris, 2015).

Moreover, the 'quality of information' variable (QUAL) is also not significantly correlated with leverage (LEV), which is inconsistent with H1. This finding is also inconsistent with the study of Campenhout and Caneghem (2009) which shows a positive correlation between quality of information and leverage. In contrast, the profitability (PROF) variable shows a significantly negative correlation (-0.33) with leverage (LEV). The negative sign indicates that firms with negative performance (loss) tend to rely on debt to run their business operation. The value of the correlation indicates that these two variables are moderately correlated. The negative relationship between profitability and leverage is supported by past studies (e.g. Ahmad and Wan Aris, 2015; Psillaki et al., 2016).

The matrix can also help to recognize possible problems of co-linearity between the several independent variables. As predicted, some of the correlations are statistically significant. For example, firm size (SIZE) is positively correlated with information quality (QUAL) at the 1 percent level, which indicates that larger firms prepare a higher quality of information (QUAL) in preparing their financial statements. These coefficients are not high enough to cause serious problems of co-linearity even the existence of some statistically significant correlation between several variables.

58

4.3 Multivariate Analysis

Table 4.3 Regression Result (Model I)

Explanatory variables	Expected sign	Std. Error	Coefficients	t	Sig.
Constant		2.677		3.593	0.001
Quality of information	+	0.732	0.218	1.458	0.148
Firm size	+	0.194	-0.479	-2.945	0.004
Firm age	-	0.409	0.054	0.533	0.595
Asset structure	+	0.768	-0.098	-1.060	0.292
Profitability	-	0.950	-0.281	-2.990	0.004

F = 5.436   Sig. = 0.000   R square = 0.224   Adjusted R square = 0.183

Notes: Leverage (LEV) is total liabilities/total assets; Quality of information (QUAL) is dummy variable that takes a value of 1 if a firm use the complete format of FS (MFRS) and 0 otherwise; Firm size (SIZE) is natural logarithm of total assets; Firm age (AGE) is natural logarithm of the number of years since incorporation of the firm; Asset structure (AS) is tangibility assets (net fixed assets + inventory) / total assets; profitability is ROA (return on total assets = EBIT/total assets)

Table 4.3 shows the output of the summary for the ordinary least square (OLS) regression model with leverage (LEV) as the dependent variable. This table provides the values of R Square and adjusted R square that were used to see the effectiveness of the independent variables to predict the dependent variable.

According to Table 4.3, the value of R Square is 0.224, which demonstrates that independent variables (quality of information, asset structure, size, age and profitability) explain 22.4 percent of the variation in firm debt as measured by the leverage. A model is said to be good if the value of R Square is close to 1.0. Based on this output, 0.224 is a low value but acceptable value because it is quite close to the value of R Square in past studies such as Psillaki et al., (2016) who had R Square value of 0.3939 and. Masnoon and Saeed (2014) found a relatively high R Square value which is 0.4794.

Regression analysis is a method for evaluating the linear association between a dependent variable and an independent variable. Table 4.3 shows that the variables asset structure (AS), the quality of information (QUAL) and firm's age (AGE) are insignificantly related to leverage (LEV). On the other hand, profitability (PROF) and firm size (SIZE) are significantly related with leverage (LEV).

The significant negative coefficient for firm size (which is inconsistent with H2) is in line with the results reported in Heyman et al. (2008) and Caneghem and Campenhout

60

(2012) on the financial structure of Belgian SMEs. Whereas both TOT and POT predict a positive relationship, firm size is a difficult variable to interpret, as it may capture different effects (Heyman et al. 2008). For example, in our sample (Table 4.2), firm size is significantly positively related to firm age and quality of information. Thus, one potential explanation for the observed negative relationship is that large firms have more internally generated funds (i.e. retained profits) that are subsequently used to finance the firm.

As a robustness check, another regression model (hereafter referred to as Model II, whilst the original model is named as Model I) was developed to address the problem of outliers as represented by the twelve companies which have large retained losses on their balance sheet (see subsection 4.1 above). These twelve companies were excluded from the analysis. A new table for Pearson Correlation Coefficient was constructed as shown in Table 4.4 and the new regression result is shown in Table 4.5.

Table 4.4 Correlation Coefficients (excluding outliers)

		LEV	QUAL	SIZE	AGE	AS	PROF
LEV	Pearson Correlation	1					
	Sig. (1-tailed)						
QUAL	Pearson Correlation	-0.413**	1				
	Sig. (1-tailed)	0.000					
SIZE	Pearson Correlation	-0.351**	0.809**	1			
	Sig. (1-tailed)	0.000	0.000				
AGE	Pearson Correlation	-0.168	0.257**	0.386**	1		
	Sig. (1-tailed)	0.059	0.008	0.000			
AS	Pearson Correlation	0.183*	0.099	0.178*	0.064	1	
	Sig. (1-tailed)	0.044	0.179	0.049	0.277		
PROF	Pearson Correlation	-0.025	-0.114	-0.243*	-0.158	-0.025	1

61

| Sig. (1-tailed) | 0.409 | 0.146 | 0.011 | 0.071 | 0.409 |

Note: Leverage (LEV) total liabilities/total assets; Asset structure (AS) is tangibility assets (net fixed assets + inventory) / total assets; profitability (PROF) is ROA (return on total assets = EBIT/total assets); QUAL (quality of information) is dummy variable that takes a value of 1 if a firm use the complete format of FS (MFRS) and 0 otherwise; SIZE (Firm size) is natural logarithm of total assets; AGE (Firm age) is natural logarithm of the number of years since incorporation of the firm.

* Correlation is significant at the 0.05 level (1-tailed).

** Correlation is significant at the 0.01 level (1-tailed).

From Table 4.4, the asset structure (AS) or tangibility of assets also affects the capital structure of the investigated Malaysian SMEs. The tangibility variable is positively related to leverage and the relationship is statistically significant at the 5 percent level. The significant positive coefficient on the asset structure variable is consistent with H4 (and TOT) and supports the view that firms with more tangible assets will have easier access to external debt. The large coefficient for asset structure confirms that collateral is essential for SMEs in mitigating agency problems between the owner and the lender. This result is similar to those obtained by Caneghem and Campenhout (2012) in Belgium, by Sogorb-Mira (2005) in Spain, and by Drobetz and Fix (2003) in Switzerland, but different from those found by Cassar and Holmes (2003) in Australia.

Table 4.5 Regression result (excluding outliers) - Model II

Explanatory variables	Expected sign	Std. Error	Coefficients	t	Sig.
Constant	+	0.389	0.840	2.159	0.034
Quality of information	+	0.093	-0.335	-2.003	0.048
Firm size	+	0.026	-0.116	-0.645	0.521
Firm age	-	0.050	-0.065	-0.621	0.536

62

Asset structure	+	0.093	0.235	2.382	0.020
Profitability	-	0.221	-0.084	-0.838	0.405

F = 5.047   Sig. = 0.000   R square = 0.235   Adjusted R square = 0.189

Notes: Leverage (LEV) is total liabilities/total assets; Quality of information (QUAL) is dummy variable that takes a value of 1 if a firm use the complete format of FS (MFRS) and 0 otherwise; Firm size (SIZE) is natural logarithm of total assets; Firm age (AGE) is natural logarithm of the number of years since incorporation of the firm; Asset structure (AS) is tangibility assets (net fixed assets + inventory) / total assets; profitability is ROA (return on total assets = EBIT/total assets)

From Table 4.5, the value of R Square is 0.235, which demonstrates that the independent variables explain 23.5 percent of the variation in firm debt as measured by the leverage. The values for *F* and Adjusted *R* square are almost similar to the first model. Unlike the results shown in the first model, only two variables show significant relationship with leverage, namely, asset structure (AS) and quality of information (QUAL). In addition, the coefficient for the variable asset structure has the predicted positive sign, while the variable 'quality of information' (QUAL) has a negative sign. The observed significant negative coefficient for QUAL is inconsistent with H1 and indicates that firms which choose to adopt MFRS (considered as having a higher quality of information) are associated with significantly lower leverage. This result is different from those found by Caneghem and Campenhout (2012) in Belgium who found a positive relationship with leverage. This result may be due to the firm size variable which is a difficult variable to interpret, as it may capture different effects. Forty eight out of eighty eight companies in the sample have an average total assets that are higher than the mean value. This again support the view that large firms have more internally generated funds (i.e. retained profits) that are subsequently used to finance the firm rather than seeking for external funds.

4.4   Hypothesis Testing

This section summarises the result of the hypothesis developed earlier in Chapter Three. The Pearson Correlation results of Table 4.2 show whether the relationship between dependent variable; leverage (LEV) and the independent variables including structure (AS), profitability (PROF), quality of information (QUAL), firm size (SIZE) and firm age (AGE) are positive or negative and significant or insignificant. Each hypothesis is explained below.

H1: Quality of information is positively related to firm leverage.

Based on Table 4.2 (Pearson's correlation), the study found a negative correlation between quality of information (QUAL) and leverage (LEV) which is 0.161 and it shows an insignificant relationship (with p-value of 0.055). The regression analysis (Table 4.3) also shows a non-significant result with a correlation coefficient of 0.218 (t = 1.458, p = 0.148). Since both results are not significant, the hypothesis was rejected for Model I. However in Model II, quality of information (QUAL) is negatively correlated with leverage (LEV) at the one percent level. The regression analysis (Table 4.5) also shows a significant negative relationship between quality of information (QUAL) and leverage (LEV) at the five percent level. Since both results are significant, the H1 hypothesis cannot be rejected for Model II.

H2: Firm size is positively related to the firm leverage.

For Model I, based on Table 4.2 (Pearson's correlation), the study found a significant negative correlation between firm's size (SIZE) and leverage (LEV) with a correlation of -0.339 (p-value = 0.000). The regression analysis (Table 4.3) also shows a significant negative relationship with a correlation coefficient of -0.479 (t = -2.945, p = 0.004). Since both results are significant, so the H2 hypothesis cannot be rejected. In Model II, the Pearson's correlation shows a significant negative correlation between firm size and leverage at the one percent level. However, the regression analysis (Table 4.5) shows an insignificant negative relationship between firm size and leverage (LEV). Since both results are not consistent, the H2 hypothesis can be rejected for Model II.

H3: Firm age is negatively related to firm leverage.

Based on Table 4.2 (Pearson's correlation), the study found a negative correlation between firm's age (AGE) and leverage (LEV) which is -0.105 and it shows non-significant correlation as the p-value was 0.149. In addition, the regression analysis (Table 4.3) also shows that age is not significantly related with leverage. Since both results are not significant, so the H3 hypothesis cannot be accepted. Similarly, in model II, since both the results for the Pearson's correlation and regression analysis show insignificant relationship between firm age and leverage (LEV), the H3 hypothesis can be rejected.

H4: Asset structure is positively related to firm leverage.

65

Based on Table 4.2 (Pearson's correlation), the study found a negative correlation between asset structure (AS) and leverage (LEV) which is -0.097 and the relationship is not significant as the p-value was 0.168. In addition, the regression analysis in Table 4.3 also shows that asset structure (AS) is not significantly related with leverage. Since both results are not significant, so the H4 hypothesis can be rejected. However in Model II, asset structure (AS) is negatively correlated with leverage (LEV) at the five percent level. The regression analysis (Table 4.5) also shows a significant negative relationship between asset structure and leverage at the five percent level. Since both results are significant, the H4 hypothesis cannot be rejected for Model II.
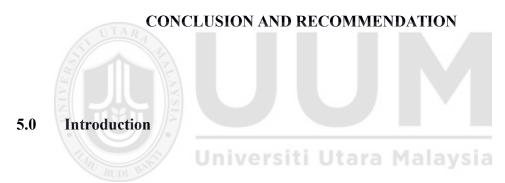
H5: Profitability is negatively related to firm leverage.

Table 4.2 (Pearson's correlation), shows a significant negative relationship between profitability (PROF) and leverage (LEV) with a correlation coefficient of -0.331 and having a p-value of less than 1%. The regression analysis (Table 4.3) also shows a significant negative relationship with a correlation coefficient of -0.281 (t = -2.990, p = 0.004). Since both results are significant, so the H5 hypothesis was accepted. Similarly, in model II, since both the results for the Pearson's correlation and regression analysis also show insignificant relationship between profitability and leverage, the H5 hypothesis can be rejected.

4.5   Chapter Summary

This chapter describes the descriptive statistics for all dependent and independent variables in this study which was based on the 100 SMEs in the manufacturing industry in Malaysia. The result of the Pearson correlation coefficient was used to investigate the association between leverage and all the independent variables. Furthermore, the results were then reinforced through regression analysis which shows whether the independent variables could have a significant (or non-significant) influence on leverage. Then, lastly this chapter discusses whether the hypotheses developed can be accepted or rejected.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter concludes this present study and consists of five sections. Section 5.1 discusses the conclusion of the study, followed by section 5.2 which presents the limitation of the study, while section 5.3 discusses the contribution of the study. Section 5.4 provides suggestion for the future research and section 5.5 summarises the chapter.

5.1 Conclusion

This study provides a picture about the financing behaviour of Malaysian SMEs in choosing the best source of capital to run their business operation. The relevant theories

of capital structure, namely the MM theory, TOT, POT, agency theory and the market timing theory were discussed, and empirical evidences were collected by using one dependent variable and five independent variables. Consequently, this study aims to provide a better understanding on the determinants of capital structure of Malaysian SMEs.

As mentioned in Chapter 1, the objective of the study is to examine the determinants of capital structure of Malaysian SMEs in the manufacturing industry. The sample used in this study comprised of 100 SMEs firms in Malaysia with the exclusion of firms operating in the banks, insurance, services and other financial institutions industries. The study had formulated five hypotheses to be tested.

Overall, the mean value of leverage was 93%, which indicates that the most important source of capital used by Malaysian SME firms is derived from debt. This high leverage ratio shows that Malaysian SMEs relies heavily on debt.

For model I, the Pearson correlation coefficient results shows that, profitability (PROF) and firm size (SIZE) are negatively and significantly correlated with leverage (LEV) as the dependent variable. On the other hand, three other variables, namely asset structure (AS), quality of information (QUAL) and firm age (AGE) shows no correlation with leverage.

This study indicated that the relationship between profitability (PROF) and leverage (LEV) is significantly negative. In terms of quality of information (QUAL), the study finds that there is a negative but non-significant relationship with leverage. The variable asset structure (AS) also has a negative relationship with leverage, but the relationship is

68

not significant. For firm's size (SIZE), this study finds that there is a significant negative relationship with leverage. Lastly, this study finds a negative and non-significant relationship between firm age (AGE) and leverage.

The one way analysis of variance (ANOVA) also shows that the F value was significant (with p value less than 0.01).

As for the regression model, the result shows that the five independent variables consisting of quality of information, asset structure, size, age and profitability explains 22.4 percent of the variation in the firm debt, measured by leverage. The regression analysis was employed to examine the effect of asset structure, profitability (PROF), quality of information (QUAL), size (SIZE) and age (AGE) on leverage. The result shows that the quality of information (QUAL), asset structure (AS) and firm's age (AGE) do not significantly influence leverage. On the other hand, profitability (PROF) and firm size (SIZE) significantly influenced leverage.

As for Model II, the Pearson correlation coefficient results show that quality of information (QUAL) and firm size (SIZE) are negatively and significantly correlated with leverage (LEV) at the one percent level, whereas for asset structure (AS), it is negatively and significantly correlated with leverage (LEV) at the five percent level. On the other hand, two other variables, namely, profitability (PROF) and firm age (AGE) shows no correlation with leverage.

The one way analysis of variance (ANOVA) also shows that the F value was significant (with p value less than 0.01). As for the regression model, the result shows that the five independent variables consisting of quality of information, asset structure, size, age and

profitability explains 23.5 percent of the variation in the firm debt, measured by leverage. The regression analysis was employed to examine the effect of asset structure, profitability (PROF), quality of information (QUAL), size (SIZE) and age (AGE) on leverage. The result shows that the quality of information (QUAL) and asset structure (AS) do significantly influence leverage at the five percent level. On the other hand, profitability (PROF), firm's age (AGE) and firm size (SIZE) do not significantly influenced leverage.

Finally, the finding suggests that the traditional capital structure theories such as the TOT and POT are significant in clarifying the capital structure in Malaysian SMEs. For instance, the correlation matrix (Table 4.2) showed a positive correlation between firm size and quality of information. The positive association is in line with TOT which proposed a parallel correlation. The result therefore supports that larger firms prepare a higher quality of information in preparing their financial statements. Meanwhile, the negative correlation between profitability and leverage is in line with POT which proposed an inverse correlation. It means that high profitability firms will reduce the using of debt and vice versa. In model II, the result obtained is also consistent with agency theory, as it shows a positive relationship between asset tangibility and leverage.

Therefore, the study contends that every theory has their own specific explanation for firms' financing behaviour. As argued by Myers (2001) there is no single theory that provides a general explanation of firms' financing strategies.

5.2   Limitation of the study

Similar to other empirical studies regarding SME's choice of capital structure, this study also has its own limitations. The first limitation is the generalizability of the results of this study. This study focuses only on one financial year, specifically 2013 which may not be sufficient to explain everything about the financing behaviour of Malaysian SMEs.

Second, the number of companies taken as the sample size is limited to the small and medium enterprises, excluding the micro enterprises. Besides, SMEs are not compulsory to publish their financial information like public listed firms. Since SMEs are not obliged to publish their financial statement, then they can choose whether to publish it partially or incomplete information unless they are required to do so. The sample size of this study is limited to only 100 SMEs due to lack of transparency and incomplete data which could lead to an unbalanced dataset. The accessibility of data for SMEs is mainly restricted by two factors: number of firms and history of financial data. The most crucial limitation of SMEs research is the adversities to obtain data.

Third, all the selected firms in this study came from the manufacturing sector. In fact, there are many other sectors such as consumer sector, service, trading and others. Therefore, the results of the study may not be generalized to other sectors. In order to get a clearer picture of SMEs financing choice, a representative sample from each sector may be employed in future research.

5.3   Contribution of the study

This study theorietically contributes to the existing literature by introducing a new variable, namely the quality of information, which has not been used in prior studies, to examine its impact on capital structure. The findings of this study will shed light on firms' specific variables which might influence financing behaviour of Malaysian SMEs.

Therefore, practically, this study might be useful for the manager who wish to set up a business in Malaysia. Thus, this study will help managers to make a good decision on the proportion of their capital structure. They will also be able to determine the best financing pattern for their company either via equity or debt.

5.4   Suggestion for future research

For future research, there are several avenues that can be employed by researchers. Firstly, a bigger sample size should be used. As this study only used 100 SMEs firm as the sample, a bigger sample size is needed in order to generalize the findings and also to avoid biased conclusion. Secondly, this study focused only on Malaysian SMEs in the manufacturing sector because they serve as the backbone to the country's economic growth. According to Ibrahim and Masron (2011), the contribution of SMEs to Malaysian economy accounted for about 99% of all business, 57% of total employment, 35% of GDP and 20% of total exports. A study that covers other sectors would provide a more accurate picture of SMEs financing behaviour in the Malaysian context.

5.5   Chapter summary

This chapter concludes the study by summarising the major findings, limitation of the study, contribution of the study and suggestion for future research. It is hoped that this study would provide the avenues for more research to be conducted for those who want to do a similar topic.

REFERENCES

Ab Manan, S. K., Othman, J., & Shahadan, A. (2011). Descriptive Analysis on the Pattern of SME Financing in Malaysia. In *2011 3rd International Symposium & Exhibition in Sustainable Energy & Environment* (pp. 1–3).

Abdullah, M. A., & Manan, S. K. A. (2011). Small and Medium Enterprises and Their Financing Patterns: Evidence from Malaysia. *Journal of Economic Cooperation and Development*, *2*(32), 1–18.

Abe, M., Troilo, M., & Batsaikhan, O. (2015). Financing small and medium enterprises in Asia and the Pacific. *Journal of Entrepreneurship and Public Policy*, *4*(1), 2–32. http://doi.org/10.1108/JEPP-07-2012-0036

Abeywardhana, D. K. . (2015). Capital Structure and Profitability : An Empirical Analysis of SMEs in the UK. *Journal of Emerging Issues in Economics, Finance and Banking*, *4*(2), 1661–1675.

Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana. *The Journal of Risk Finance*, *6*(5), 438–445.

Abor, J., & Biekpe, N. (2009). How do we explain the capital structure of SMEs in sub-Saharan Africa?: Evidence from Ghana. *Journal of Economic Studies*, *36*(1), 83–97.

Abu Mouamer, F. M. (2011). The determinants of capital structure of Palestine-listed companies. *The Journal of Risk Finance*, *12*(3), 226–241.

Acaravci, S. K. (2015). The Determinants of Capital Structure :Evidence from the

Turkish Manufacturing Sector. *International Journal of Economics and Financial Issues*, *5*(1), 158–171.

Ahmad, N., & Wan Aris, Y. B. (2015). Does Age of the Firm Determine Capital Structure Decision? Evidence from malaysia Trading and Service Sector. *International Business Management*, *9*(3), 200–207.

Ahmeti, F., & Prenaj, B. (2015). A Critical review of Modigliani and Miller's Theorem of Capital Structure. *International of Economics, Commerce and Management*, *III*(6), 914–924.

Al-Ajmi, J., Hussain, H. A., & Al-Saleh, N. (2009). Decisions on capital structure in a Zakat environment with prohibition of riba: The case of Saudi Arabia. *The Journal of Risk Finance*, *10*(5), 460–476.

Alipour, M., Seddigh, M. F. M., & Derakhshan, H. (2015). Determinants of capital structure : an empirical study of firms in Iran. *International Journal of Law and Management*, *57*(1), 53–83. http://doi.org/10.1108/IJLMA-01-2013-0004

Amidu, M. (2007). Determinants of capital structure of banks in Ghana: an empirical approach. *Journal of Management*, *2*(1), 67–79.

Ang, J. S. (1992). On the theory of finance for privately held firms. *The Journal of Entrepreneurial Finance*, *1*(3), 185–203.

Ari, H., & Mika, P. (2004). *Is the cost of debt capital higher for younger firms?*

Baker, M., & Wurgler, J. (2002). Market Timing and Capital Structure. *The Journal of Finance*, *57*(1), 1–32.

Benkraiem, R., & Gurau, C. (2013). How do corporate characteristics affect capital structure decisions of French SMEs ? *International Journal of Entrepreneurial Behaviour & Research*, *19*(2), 149–164. http://doi.org/10.1108/13552551311310356

Bereźnicka, J. K.-. (2013). How Does Asset Structure Correlate with Capital Structure ? – Cross-Industry and Cross-Size Analysis of the EU Countries. *Universal Journal of Accounting and Finance*, *1*(1), 19–28. http://doi.org/10.13189/ujaf.2013.010103

Beuselinck, C., Deloof, M., & Manigart, S. (2008). Private equity investments and disclosure policy. European Accounting Review, 17(4), 607–639.

Boateng, A. (2004). Determinants of capital structure: Evidence from international joint ventures in Ghana Agyenim. *International Journal of Social Economics*, *31*(1/2), 56–66.

Bubic, J., & Susak, T. (2015). Detecting Optimal Financial and Capital Structure : The Case of Small and Medium Enterprises (Sme) In Republic of Croatia. In *International Scientific Conference on Economic and Social Development* (pp. 324–333).

Burgstaller, J., & Wagner, E. (2015). How do family ownership and founder management affect capital structure decisions and adjustment of SMEs ? Evidence

74

from a bank-based economy. *The Journal of Risk Finance*, *16*(1), 73–101. http://doi.org/10.1108/JRF-06-2014-0091

Campenhout, G. Van, & Caneghem, T. Van. (2009). Information Availability , Information Quality and the Financial Structure of Belgian SMEs. *Economic and Management*, 1–22.

Caneghem, T. Van, & Campenhout, G. Van. (2012). Quantity and quality of information and SME financial structure. *Small Bus Econ*, *39*, 341–358. http://doi.org/10.1007/s11187-010-9306-3

Cassar, G. and Holmes, S. (2003), "Capital structure and financing of SMEs: Australian evidence", Accounting and Finance, Vol. 43 No. 2, pp. 123-47.

Cela, S., Shkurti, R., & Hilaj, B. (2013). Factoring as the Short Term Finance for SME and Possibility of Its Application in Albania. *International Journal of Economic Perspectives*, *7*(3), 109–117.

Chadha, S., & K. Sharma, A. (2016). An Empirical Study on Capital Structure in Indian Manufacturing Sector. *Global Business Review*, *17*(2), 1–14. http://doi.org/10.1177/0972150915619817

Chadha, S., & Sharma, A. K. (2015). Determinants of capital structure: an empirical evaluation from India. *Journal of Advances in Management Research*, *12*(1), 3–14.

Chiang, Y.-H., Cheng, E. W. L., & Lam, P. T. I. (2010). Epistemology of capital structure decisions by building contractors in Hong Kong. *Construction Innovation*, *10*(3), 329–345.

Daskalakis, N., Jarvis, R., & Schizas, E. (2013). Financing practices and preferences for micro and small firms. *Journal of Small Business and Enterprise Development*, *20*(1), 80–101. http://doi.org/10.1108/14626001311298420

Dawar, V. (2014). Agency theory, capital structure and firm performance: some Indian evidence. *Managerial Finance*, *40*(12), 1190–1206.

Dong, Z. (2012). Capital structure decisions of LPTs in a small economy. *Journal of Property Investment & Finance*, *30*(5), 493–504.

Drobetz, W. and Fix, R. (2003), "What are the determinants of the capital structure: some evidence from Switzerland", working paper, University of Basel, Basel.

Ezeoha, A., & Botha, F. (2012). Firm Age, Collateral Value, and Access to Debt Financing in an Emerging Economy: Evidence from South Africa. *Department of Economics and Economic History*, *15*(1), 55–71.

Fahmi, A.R., Noryati, A. (2013), Theoretical investigation on determinants of government linked Companies capital structure. Journal of Accounting, Finance and Academic, 3(2), 72-85.

Fareed, Z., Aziz, S., Naz, S., Shahzad, F., Arshad, M., & Amen, U.-. (2014). Testing the Relationship Between Profitability and Capital Structure of Textile Industry of Pakistan. *World Applied Sciences Journal*, *29*(5), 605–609.

http://doi.org/10.5829/idosi.wasj.2014.29.05.1949

Forte, D., Barros, L. A., & Nakamura, W. T. (2013). Determinants of the Capital Structure of Small and Medium Sized Brazilian Enterprises. *Brazilian Administration Review*, *10*(3), 347–369.

Fosberg, R. H. (2006). Profitability And Capital Structure Of Amex And Nyse Firms. *Journal of Business and Economics Research*, *4*(11), 57–64.

Gill, A., Biger, N., Pai, C., & Bhutani, S. (2009). The Determinants of Capital Structure in the Service Industry : Evidence from United States. *The Open Business Journal*, *2*(April), 48–53. http://doi.org/10.2174/1874915100902010048

Gomez, G., Rivas, A. M., & Bolanos, E. R. L. (2014). The determinants of capital structure in Peru. *Academia Revista Latinoamericana de Administración*, *27*(3), 341–354.

Haron, H., Said, S., K, J., & Ismail, I. (2013). Factors Influencing Small Medium Enterprises (SMES) in Obtaining Loan. *International Journal of Business and Social Science*, *4*(15), 182–195.

Haron, R. (2014a). Capital structure inconclusiveness: evidence from Malaysia, Thailand and Singapore. *International Journal of Managerial Finance*, *10*(1), 23–38.

Haron, R. (2014b). Key Factors Influencing Target Capital Structure of Property Firms in. *Asian Social Science*, *10*(3), 62–69. http://doi.org/10.5539/ass.v10n3p62

Heyman, D., Deloof, M., & Ooghe, H. (2008). The financial structure of private held Belgian firms. *Small Business Economics*, *30*(3), 301–313. http://doi.org/10.1007/s11187-006-9031-0

Holmes, S., & Kent, P. (1991). An Empirical Analysis of the Financial Structure of Small and Large Australian Manufacturing Enterprises. *The Journal of Small Business Finance*, *1*(2), 141–154. http://doi.org/10.1007/s10273-011-1262-2

Hussain, S. S., Hamza, S., & Miras, H. (2015). The Determinants of Capital Structure for Malaysian Food Producing Companies. *International Journal of Accounting, Business and Management*, *1*(1), 1–25.

Ibrahim, H., & Masron, T. A. (2011). Capital Structure and the Firm Determinants : Evidence from Small and Medium Enterprises (SMEs) in Malaysia. In *International Conference on Economics, Trade and Development* (Vol. 7, pp. 25–28).

Jahanzeb, A., Bajuri, N. H., Karami, M., & Ahmadimousaabad, A. (2014). Trade-Off Theory , Pecking Order Theory and Market Timing Theory : A Comprehensive Review of Capital Structure Theories. *International Journal of Management and Commerce Innovations*, *1*(1), 11–18.

Jan Khan, M. W., & Khalique, M. (2014). An Overview of Small and Medium Enterprises in Malaysia and Pakistan : Past , Present and Future Scenario. *Business*

76

and Management Horizons, *2*(2), 38–49. http://doi.org/10.5296/bmh.v2i2.5792

Jensen, M. C. (1976). Theory of the Firm : Managerial Behavior , Agency Costs and Ownership Structure. *Journal of Financial Economics*, *3*(4), 305–360.

Jensen, M. C. (1986). Agency Costs of Free Cash Flow , Corporate Finance , and Takeovers. *The American Economic Review*, *76*(2), 323–329.

Jo˜eveer, K. (2013). What do we know about the capital structure of small firms ? *Small Bus Econ*, *41*, 479–501. http://doi.org/10.1007/s11187-012-9440-1

Kandasamy, S., Yoke, C. C., Yean, U. L., Ling, T. P., & Wei, P. (2015). Contribution of SMEs to Economic Development of ASEAN Countries : The Three Focus Areas. *Global Journal of Business and Social Science Review*, *4*(December), 143–156.

Kardan, B., Salehi, M., & Abdollahi, R. (2016). The relationship between the outside financing and the quality of financial reporting : evidence from Iran. *Journal of Asia Business Studies*, *10*(1), 20–40. http://doi.org/10.1108/JABS-04-2014-0027

Kariuki, S. N., & Kamau, C. G. (2014). Determinants of Corporate Capital Structure among Private Manufacturing Firms in Kenya : A Survey of Food and Beverage Manufacturing Firms. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *4*(3), 49–62. http://doi.org/10.6007/IJARAFMS/v4-i2/1026

Katua, T. (2014). The Role of SMEs in Employment Creation and Economic Growth in Selected Countries. *International Journal of Education and Research*, *2*(12), 461–472.

Kayadibi, S., Polat, R., & Fidan, Y. (2013). Small and Medium-Sized Business in Malaysian Economy : Case of Turkish Entrepreneurs in Kuala Lumpur. In *Proceedings of 7th Global Business and Social Science Research Conference* (Vol. 1, pp. 265–281).

Khalique, M., Md. Isa, A. H., Shaari, J. A. N., & Ageel, A. (2011). Challenges Faced by the Small and Medium Enterprises (SMEs) in Malaysia: An Intellectual Capital Perspective. *International Journal of Current Research*, *3*(2010), 398–401.

Kiong, I. W. T., & Lean, H. H. (2011). Capital Structure of Government-Linked Companies in Malaysia. *Asean Academy of Management Journal of Accounting and Finance*, *7*(2), 137–156.

Kochhar, R. (1996). Explaining Firm Capital Structure : The Role of Agency Theory vs . Transaction Cost Economics. *Strategic Management Journal*, *17*(9), 713–728.

Kuala Lumpur USD/MYR Reference Rate. (2016). Retrieved from http://www.bnm.gov.my/index.php?ch=statistic&pg=kualalumpurusdmyrreferencerate

Kumah, S. P. (2013). Corporate Capital Structure Determinants of Listed Firms in West African Monetary Zone – A Review of Related Literature. *Research Journal of Finance and Accounting*, *4*(19), 19–29.

Kumar, S., & Rao, P. (2016). Financing patterns of SMEs in India during 2006 to 2013 À an empirical analysis. *Journal of Small Business and Entrepreneurship*, *28*(2), 97–131.

Liang, J., Li, L. F., & Song, H.-S. (2014). An explanation of capital structure of China's listed property firms. *Property Management*, *32*(1), 4–15.

Madanchian, M., Hussein, N., Noordin, F., & Taherdoost, H. (2015). The Role of SMEs in Economic Development ; Case Study of Malaysia. *International Journal of Academic Research in Management (IJARM)*, *4*(3), 77–84.

Masnoon, M., & Saeed, A. (2014). Capital Structure Determinants of KSE Listed Automobile Companies. *European Scientific Journal*, *10*(13), 451–461.

Mazila, M.Y., Fauziah, M.Y., Nurzahratul, L. (2013), Determinants of capital structure in Malaysia electrical and electronic sector. Journal of Social, Human Science and Engineering, 7(6), 73-78.

Memon, P. A., Rus, R., & Ghazali, Z. (2015). Dynamism of Capital Structure : Evidence from Pakistan. *Journal of International Business and Economics*, *3*(1), 52–63. http://doi.org/10.15640/jibe.v3n1a7

Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, *48*(3), 261–297.

Mohamed Zabri, S. (2013). *Financing Preferences and Capital Structure Among Successful Malaysian SMEs*.

Muscettola, M. (2014). Structure of Assets and Capital Structure. What Are The relations with Each Other? An Empirical Analysis of a Sample of Italy. *European Journal of Business and Social Sciences*, *2*(11), 55–69.

Myers, S. C. (1977). Determinants of Corporate Borrowing. *Journal of Financial Economics*, *5*, 147–175.

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, *39*(3), 575–592.

Myers, S. C. (2001). Capital Structure. *The Journal of Economic Perspectives*, *15*(2), 81–102.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), 187–221. http://doi.org/10.1016/0304-405X(84)90023-0

New proposals for private entity reporting in Malaysia. (2013). Retrieved from http://masb.org.my/pages.php?id=20

Nikolaos, D., Nikolaos, E., Eleni, T., & Dimitrios, V. (2014). Capital structure and size: new evidence across the broad spectrum of SMEs. *Managerial Finance*, *40*(12), 1207–1222. http://doi.org/10.1108/MF-11-2013-0325

Njeru, A. W., Namusonge, G. S., & Kihoro, J. M. (2012). Size as a Determinant of

Choice of Source of Entrepreneurial Finance for Small and Medium Sized Enterprises in Thika District. *International Journal of Business and Social Science*, *3*(16), 53–58.

Ogbulu, O. M., & Emeni, F. K. (2012). Determinants of Corporate Capital Structure in Negeria. *International Journal of Economics and Management Sciences*, *1*(10), 81–96.

Omar, S. S., Arokiasamy, L., & Ismail, M. (2009). The Background and Challenges Faced by the Small Medium Enterprises . A Human Resource Development Perspective. *International Journal of Business and Management*, *4*(10), 95–102.

Omran, M. M., & Pointon, J. (2009). Capital structure and firm characteristics: an empirical analysis from Egypt. *Review of Accounting and Finance*, *8*(4), 454–474.

Ooi, J. (1999). The determinants of capital structure Evidence on UK property companies. *Journal of Property Investment & Finance*, *17*(5), 464–480.

Palacin-Sanchez, M. J., & Ramirez-Herrera, L. M. (2013). Capital structure of SMEs in Spanish regions. *Small Bus Econ*, *41*, 503–519. http://doi.org/10.1007/s11187-012-9439-7

Paulet, E., Parnaudeau, M., & Abdessemed, T. (2014). The SME struggle for financing : a clampdown in European banks post-crisis. *Journal of Business Strategy*, *35*(2), 36–45. http://doi.org/10.1108/JBS-09-2013-0089

Psillaki, M., & Daskalakis, N. (2009). Are the Determinants of Capital Structure Country or Firm Specific ? Evidence from SMEs. *Small Business Economics*, *33*(3), 2–26.

Qaderi, B., Rasouli, P., Bakmohammadi, S., & Hamekhani, S. (2015). Impact of Firm Specific Factors on Capital Structure Decision : Evidence from Iranian Listed Companies. *Academic Journal of Research In Business And Accounting*, *3*(2), 1–10.

Rahman, A., & Arifuzzaman, S. M. (2014). Testing the Trade Off and Pecking Order Models of Capital Structure. *Journal of Economics and Finance*, *5*(6), 8–14.

Ramjee, A., & Gwatidzo, T. (2012). Dynamics in capital structure determinants in South Africa. *Meditari Accountancy Research*, *20*(1), 52–67. http://doi.org/10.1108/10222521211234228

Saarani, A. N., & Shahadan, F. (2013a). The Comparison of Capital Structure Determinants Between Small and Medium Enterprise (SMEs) and Large Firms in Malaysia. *International Journal of Economics and Finance Studies*, *5*(1), 22–32.

Saarani, A. N., & Shahadan, F. (2013b). The Determinant of Capital Structure of SMEs in Malaysia : Evidence from Enterprise 50 (E50) SMEs. *Asian Social Science*, *9*(6). http://doi.org/10.5539/ass.v9n6p64

Saleh, A. S., & Ndubisi, N. O. (2006). An Evaluation of SME Development in Malaysia. *International Review of Business Research Papers*, *2*(1), 1–14.

Sanusi, N. A. (2014). The dynamics of capital structure in the presence of zakat and

corporate tax. *International Journal of Islamic and Middle Eastern Finance and Management*, *7*(1), 89–111.

Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach (4th Edition). John Wiley & Sons, Inc.*

Sheikh, N. A., & Wang, Z. (2011). Determinants of capital structure An empirical study of firms in manufacturing industry of Pakistan. *Managerial Finance*, *37*(2), 117–133.

Sherif, M., & Elsayed, M. (2013). The impact of corporate characteristics on capital structure : evidence from the Egyptian insurance companies. *School of Management and Languages*, *44*(1), 1–27.

Shubita, M. F., & Alsawalhah, J. M. (2012). The Relationship between Capital Structure and Profitability. *International Journal of Business and Social Science*, *3*(16), 104–112.

Small and Medium Enterprises. (2017). Retrieved March 18, 2017, from https://www.smecorp.gov.my/index.php/en/small-and-medium-sized-enterprises

Sogorb-Mira, F. (2005). How SME uniqueness affects capital structure: Evidence from a 1994-1998 Spanish data panel. *Small Business Economics*, *25*(5), 447–457. http://doi.org/10.1007/s11187-004-6486-8

Stretcher, R., & Johnson, S. (2011). Capital structure: professional management guidance. *Managerial Finance*, *37*(8), 788–804. http://doi.org/10.1108/03074351111146229

Suhaila, M. K., & Wan Mahmood, W. M. (2008). *Capital Structure and Firm Characteristics: Some Evidence from Malaysian Companies*. IDEAS Working Paper Series from RePEc, St. Louis.

Thomas, Kiptanui, T., Chenuos, N., & Biwott, G. (2014). Do Profitability , Firm Size and Liquidity Affect Capital Structure ? Evidence from Kenyan Listed Firms. *European Journal of Business and Management*, *6*(28), 119–124.

Ukaegbu, B., & Oino, I. (2014). The determinants of capital structure: A comparison of financial and non-financial firms in a regulated developing country – Nigeria. *African Journal of Economic and Management Studies*, *5*(3), 341–368. http://doi.org/10.1108/AJEMS-11-2012-0072

Uyar, A., & Guzelyurt, M. K. (2015). Impact of firm characteristics on capital structure choice of Turkish SMEs. *Managerial Finance*, *41*(3), 286–300.

Velnampy, T., & Niresh, J. A. (2012). The Relationship between Capital Structure & Profitability. *Global Journal of Management and Business Research*, *12*(13).

Viviani, J.-L. (2008). Capital structure determinants: an empirical study of French companies in the wine industry. *International Journal of Wine Business Research*, *20*(2), 171–194.

Yazdanfar, D., & Öhman, P. (2015). Debt financing and firm performance : an empirical

study based on Swedish data. *The Journal of Risk Finance*, *16*(1), 102–118. http://doi.org/10.1108/JRF-06-2014-0085

Zabri, S. M. (2012a). Study of Financing Preferences and Capital Structure among Malaysian SMEs : Evidence from Enterprise 50 Award Winners. In *Asean Entrepreneurship Conference* (pp. 131–141).

Zabri, S. M. (2012b). The Determinants of Capital Structure Among SMEs in Malaysia. In *Proceedings International Conference of Technology Management, Business and Entrepreneurship* (pp. 132–146).

Zain, Z. M., Anas, Y., Hassan, F., Lehar, H., & Shamsuddin, S. (2012). Challenges , Opportunities and Performance of Bumiputera SMEs in the Food Industry : A Malaysian Perspective. In *International Conference on Innovation, Management and Technology Research* (pp. 21–22).

Zare, R., Farzanfar, F., & Boroumand, M. (2013). Examining the Firm Age , Size and Asset Structure Effects on Financial Leverage in the Firms Listed in Tehran Stock Exchange. *International Journal of Economy, Management and Social Sciences*, *2*(6), 256–264.

Zhang, Y. (2010). The Product Category Effects on Capital Structure : Evidence from the SMEs of British Manufacturing Industry. *International Journal of Business and Management*, *5*(8), 86–113.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business Research Methods*.