

Quality of Information and the Moderating Effect of Board Size on SME Financial Structure: Malaysian Evidence

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Abstract

This study examines whether the quality of financial statement information affects the financial structure of small and medium-sized enterprises (SMEs). Furthermore, it also make the first attempt to test the moderating effect of board size on the relationship between quality of information and leverage decision. Malaysian SMEs are used because there are important differences in the magnitude of disclosure requirements among them. A sample size of 100 SMEs has been considered to do the empirical evaluation. The Ordinary Least Squares (OLS) regression was used to analyze the identified firm-specific variables that affect financial structure. In contrast with the traditional view that asymmetric or incomplete information restricts access to external funds, the results indicate that the quality of financial statement information is not significantly related to SME leverage. Board size does not exert any influence on the relationship between quality of information and leverage decision. However, leverage is negatively related to total assets and profitability.

Keywords: Financial structure; Board size; SME; Information asymmetry; Quality of information.



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1. Introduction

Generally, capital structure of a firm may consist of equity or debt or a combination of debt and equity. The various financing decisions are vital for the financial welfare of the firm. A wrong decision about the capital structure may lead to financial distress and eventually to bankruptcy. Modigliani & Miller (1958) argues that, in a 'perfect' world, the choice between equity and debt is irrelevant. When taxes and other market imperfections are introduced, only a single optimal financial structure is available, because firms will increase debt financing until the advantage of tax deductibility of interest expenses is counterbalanced by the disadvantages of other market imperfections such as bankruptcy costs (i.e. trade-off theory). Other theories have challenged this view, such as the pecking-order theory which predicts that, due to asymmetric information, firms will prefer internally generated funds over debt and equity financing (Myers, 1984; Myers and Majluf, 1984).

While substantial empirical research has focused on the financial structure choice of large/listed firms, the economic importance of SMEs (Abor and Biekpe, 2009; Nurul *et al.*, 2011; Psillaki and Daskalakis, 2008) has generated research on SME financing. For example, SMEs in Malaysia account for 99 percent or 519,000 of total establishments in the three economic sectors of manufacturing, services and agriculture and contribute approximately 3 million or about 65.1 percent of the total employment (UNDP, 2007). Furthermore, previous results for large/listed firms may not be applicable to SMEs. Firstly, the fiscal advantages of debt will typically be quite restricted for SMEs, because (1) SMEs have higher cost of debt than large firms because banks consider SMEs to be more risky than large firms (Scherr *et al.*, 1993); (2) small firms also generally have lower profit margins, because they operate in less concentrated and more competitive markets; and (3) SMEs are typically subject to lower tax rates (Pettit and Singer, 1985). Secondly, capital structure decisions in SMEs are often influenced by the entrepreneur's desire to maintain family control over the firm (Ang, 1992). Finally, information asymmetry problems are found to be more acute for SMEs (discussed later in Section 2).

We add to the growing body of research on SME financial structure by formally testing the impact of quality of accounting information using a restricted sample of Malaysian SMEs. It is generally accepted that informational opacity hinders SMEs' access to external funds (Berger A. N. and Udell, 1998), but the effect of differences in (quality of) presentation of financial information has been barely examined. No study has been conducted to investigate the direct impact of information quality as a main independent variable on leverage decision for SMEs in Malaysia. Moreover, this is the first study that empirically examines the moderating effect of board size in the relationship of leverage decision and quality of information. Therefore, we attempt to further investigate this relationship in Malaysia with updated data. It is hoped that the study's findings help bridge the gap and shed some light on the literature, specifically in the Malaysian context.

In line with the traditional information asymmetry argument, our results indicate that the quality of financial information is not significantly related to SME leverage. Findings for our other firm-specific determinants of leverage are generally consistent with prior studies: SME leverage is negatively related to firm size (total assets) and profitability. The other three variables (namely firm age, quality of information, and asset structure) do not show any significantly relationship with leverage. The paper proceeds as follows. In Section 2, we briefly review the main financial structure theories and formulate our hypotheses. Our sample and variable selection are described in Section 3. In Section 4, we present the methodology and our empirical results. We conclude in Section 5.

2. Theoretical Review and Formulation of Hypotheses

Pecking-order theory (POT), as proposed by Myers (1984) and Myers and Majluf (1984), is based on the assumption that inside management is better informed of the true value of the firm than outside investors. Managers will prefer those sources of funds that are less vulnerable to undervaluation resulting from information asymmetries. The theory states that firms, while making their funding choice, prefer to use internal financing (retained earnings) rather than external financing. However, if they are forced to use external funding, they prefer debt financing to equity financing. Jean (2004) argued that this model is significant in explaining several patterns in corporate finance, including the tendency of companies to not issue shares and their option to hold high level of retained cash. From the perception of firms, issuing equity is the riskiest decision due to investors' high expected return. In contrast, carrying more debt has a minor risk and retained earnings can prevent the problem. Hence, retained earnings are used as much as possible. If retained earnings are not sufficient, debt financing is used. Equity financing is employed only as a final option. The greatest limitation of the pecking order framework is that it ignores the effects of interest tax shields, financial distress, security issuance costs, agency costs, and investment opportunities, which have been widely included in recent studies on capital structure. In addition, several studies go against the pecking order hypothesis, indicating that it ignores several practical leverage choice patterns of firms (Chirinko and Singha, 2000; Dimitrios et al., 2009; Seifert and Gonenc, 2008).

In contrast to POT, the trade-off theory (TOT) was originated from the discussion by Modigliani and Miller (1963). This theory assumes that the cost of debt can protect firm earnings from corporate income tax and thus 100% debt should be employed to maximise profit. However, acquiring 100% debt is extremely risky to firms. Hence, to avoid this extreme case, bankruptcy cost was introduced to offset the cost of debt. Kraus and Litzemberger (1973) concluded that the TOT presumes that the optimal leverage of firms is a trade-off between the tax benefits of debt and the costs of debt, which is known as deadweight costs of bankruptcy. Firms adopting the trade-off theory must identify an objective debt-to-value ratio and then slowly achieve the target (Myers, 1984). According to the trade-off theory, highly profitable firms have more profits to use and are in less risk of bankruptcy. Highly profitable firms therefore aim to maintain a higher debt-to-capital ratio. However, empirical evidence indicates that this assumption is not true and does not entirely support the trade-off model. Baskin (1989) gathered data for more than 50 years in different countries and showed that highly profitable firms tend to have less debt, even though they have high levels of earnings to cover the risk of bankruptcy. Whereas some studies have explicitly tried to distinguish between these theories (López-Gracia and Sogorb-Mira, 2008), it appears that all the aforementioned theories help to explain SME financial structures.

Based on the aforementioned theories, this study tries to predict determinants of SME financial structure. Firstly, the lack of publicly available information about SMEs (and the resulting information asymmetry) is considered to have an important impact on their financial structure. It is typically argued that asymmetric information problems are far more severe in SMEs relative to large firms because of the lack of publicly available, uniform and detailed accounting information. Moreover, the quality of their financial statement (FS) is assumed to vary because they are typically not audited (Ortiz-Molina and Penas, 2005; Pettit and Singer, 1985), which lead to some researchers labelling them as "acutely informationally opaque" small businesses (Berger and Udell, 1998, p.886). Despite the importance of this issue, to our knowledge, no prior studies have explicitly tested the impact of information quality on SME leverage (except the Belgian's study by Caneghem and Campenhout (2012)).

The Malaysian environment provides an interesting setting to study the impact of differences in (quality of) information on the financial structure of SMEs. Firstly, Malaysian firms are required to file their financial statements (FS) according to a prescribed format in which the different items to be disclosed are explicitly defined. There are two FS formats: a complete format using the new Malaysian Financial Reporting Standards (MFRS) and an old format using the Private Entity Reporting Standards (PERS). The latter is less detailed and has lower information value than the former; for example, for the accounting standard on Presentation of Financial Statements (MFRS 101), while the complete format has 41 pages, the old format (PERS 101) consists of only 32 pages. Specific examples of differences between the two formats are that, on the balance sheet, the abbreviated format contains less detailed information with respect to financial fixed assets, inventories, investments, and long-term debt. In the abbreviated format of the income statement, operating revenues (e.g. turnover) and expenses are merely summarized as a gross margin, whereas detailed information on both operating revenues and expenses are mandatory in the complete format. Last but not least, far less information (and detail) is required in the notes for the abbreviated format of the FS. SMEs in Malaysia is characterized by the prevalence of privately held firms (and therefore low levels of ownership dispersion) and low litigation risk. The lack of public scrutiny (by e.g. investors and financial analysts) resulting from private ownership, coupled with low litigation risk, is likely to negatively affect FS quality.

A firm can opt to file the old format of the FS if it fulfils one of the following criteria: (1) has less than 200 employees or (2) has sales turnover not exceeding RM50,000,000. Firms that do not meet these criteria are required to prepare their FS according to the new format. The key advantages of using the old format for a firm are: (1) that less time is required to prepare the FS, and (2) that potentially sensitive information (e.g. turnover) is protected from public scrutiny. Accordingly, those Malaysian SMEs which are qualified to use the old format may opt to disclose the complete format of the FS (and provide the same amount of information as large Malaysian firms) but they have to use it consistently from year to year. 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, we are able to test the impact of information quality on SME financial structure. Although FS capture only one aspect of a firm's disclosure policy, "[f]inancial statements are one of the most important means by which unlisted firms communicate the status of their business to outside stakeholders." (Beuselinck et al., 2008: 616).

We predict a positive relationship between leverage and the quality of information:

H1 Financial statements quality is positively related to leverage.

For the other independent variables in our models, competing theories may predict opposite effects. Given that it is not our aim to study the validity of one specific theory, our hypotheses in these instances are based on the documented dominant effect in prior empirical studies to increase the comparability of our results to existing literature. For the same reason, given the Malaysian focus of the current study, our predictions are based upon documented effects in studies of SMEs in other countries and also based on Malaysian data, if available.

Following both TOT and POT, studies on the financial structure of SMEs typically control for firm size. Larger firms, which tend to be more diversified, have lower probabilities of default than smaller firms (Pettit and Singer, 1985; Warner, 1977). In other words, larger firms have lower bankruptcy costs, and based on TOT, a positive relation between leverage and firm size is therefore expected. Moreover, because more information is typically available for larger firms than for small firms, the former will have less information asymmetries (Cole, 2008; Psillaki & Daskalakis, 2008). Based on POT, a positive relation between leverage and firm size is therefore predicted. Whereas both theories predict a positive relationship between firm size and leverage, empirical findings are inconclusive; some studies documented positive relationships (Fahmi and Noryati, 2013; Mazila et al., 2013; Nabilah et al., 2012), while some others found negative relationships (Esperança et al., 2003; Heyman et al., 2008). Pettit and Singer (1985) argued that while agency costs of debt are likely to be higher for small firms, agency costs of equity may be even higher for those firms, and this could result in higher leverage for small firms. Consistent with this argument and based on Malaysian data, Lean et al. (2015) report a significant negative relation between leverage and firm size. Given our focus on Malaysian firms, the second hypothesis to be tested is:

H2 Firm size is negatively related to leverage.

Information asymmetries are assumed to be less severe for older firms than for younger firms, because the former have established a track record and reputation [e.g. regarding their ability to meet (financial) obligations in a timely manner] (Ang, 1991; Diamond, 1989). Thus, based on TOT, a positive relationship between firm age and leverage would be expected. Nevertheless, younger firms may generate insufficient profits (i.e. retained earnings) to finance operational growth (Cole, 2008; Esperanca et al., 2003; Lopez-Gracia and Sogorb-Mira, 2008). If the personal resources of the firm owner(s) are limited, younger firms are forced to take on external debt. In line with this view, most empirical studies (Michaelas et al., 1999; Cole, 2008) observe a negative relationship between firm age and leverage. This leads to the following hypothesis:

H3 Firm age is negatively related to leverage.

A number of studies demonstrate that the majority of loans to SMEs are collateralized (Berger A. N. and Udell, 1990; Harris and Raviv, 1991; Kon and Storey, 2003). The use of collateral is aimed at reducing agency problems (related to adverse selection and moral hazard) between the shareholder and the lender (Stiglitz and Weiss, 1981). As argued in the literature, tangible assets will be easier to collateralize (as compared with intangibles) given that they usually have reasonably active secondary markets and less uncertain values in distress situations (Hutchinson, 1995). Debt covenants are therefore typically written in terms of tangible assets and often explicitly exclude intangibles (Long and Malitz, 1992). Based on these arguments, firms with more tangible assets will have easier access to external debt. Moreover, a firm will try to maximize the issuance of secured debt vis-a-vis unsecured debt because the agency costs (and hence cost of capital) of the former are lower. In sum, firms with more tangible assets are expected to have a higher debt ratio. In spite of conflicting evidence (Esperanca et al., 2003), most empirical findings are consistent with the aforementioned expectation (Michaelas et al., 1999; Sogorb-Mira, 2005; Heyman et al., 2008). Based on the above argument, the following hypothesis is developed:

H4 Asset tangibility is positively related to leverage.

It is also common to control for profitability when modelling SME financial structure. Based on TOT, a positive relationship between leverage and profitability is expected because (1) high (er) profits tend to be associated with low(er) default risk; and (2) the higher the profitability of the firm, the more taxes that can be avoided by using debt (Cole, 2008; Heyman et al., 2008; Psillaki and Daskalakis, 2008). In contrast, a negative relationship is expected based on POT, because profitable firms have more internally generated funds, which are preferred over debt and equity financing (Cole, 2008). In support of POT, most empirical studies observe a negative relationship between leverage and firm profitability (Deesomsak et al., 2004; Nadaraja et al., 1992; Nurul et al., 2011). Based on this reasoning, the following hypothesis is developed:

H5 Profitability is negatively related to leverage.

Corporate governance has remained debatable issue among academic researchers and policy makers for the last few decades especially in the context of firm's financial structure. Shleifer and Vishny (1997) described corporate governance as the process through which supplier of capital wants certain amount of fair return on their investment. It is the philosophy and mechanism that entails the processes and structure which facilitate the creation of shareholder value through management of the corporate affairs in such a way that ensures the protection of the individual and collective interest of all the stakeholders. Shleifer and Vishny (1997) further argue that sound corporate governance principles are the foundation upon which the trust of investors and lenders is built. On the other hand, LaPorta et al., (2000) describes it as the set of rules and regulations through which outside investors protect themselves from the insiders' expropriation. Insiders in this context involve the managers of the firm and controlling shareholders. Corporate governance exists to provide checks and balances between shareholders and management and thus to lessen agency problems. Hence, organisations with better governance quality should incur less agency conflicts. Due to strong impacts of controlling shareholders on the management decisions, conflicts of thoughts and preferences occur between the shareholders and the management. A thorough review of related

literature reveals that although there are series of related prior empirical studies in this area of research from developed countries, very few studies have been conducted in the developing countries. The majority of empirical works in this area of research have mostly focused on the impact of corporate governance on firm's performance or examined the influence of ownership structure on firm value. In the Malaysian context, no study has been conducted on the effect of corporate governance (CG) on leverage of Malaysian SMEs. Hence, this study investigates one of the elements of CG, namely, board size on the capital structure of SMEs in Malaysia. This CG variable was chosen as it is the only CG variable that was available from the annual reports of Malaysian SMEs.

An effective board is essential to the success of a company. The board being the highest decision making body in a company has the responsibility to provide superior strategic guidance to ensure the firm's growth and maximize the return to investors. Moreover, board is charged with monitoring and disciplining the senior management. According to Adams and Mehran (2003) a bigger board can effectively monitor the actions of management and provides better expertise. Conversely, Lipton and Lorsch (1992) assert that large boards are less effective compared to small boards because some directors may free-ride on the efforts of others. Existing literature relevant to board size and leverage yields mixed findings. Previous studies by (Berger, Ofek, and Yermack (1997), Abor and Bikpie (2005) and Hasan and Butt (2009) showed a negative influence of board of directors' size on leverage. Anderson, Mansi, and Reeb (2004) also found a negative relationship between board size and the cost of debt financing. Moreover, they showed that an additional board member is associated with about a 10 basis point lower cost of debt financing. On the other hand, Abor (2007) and Bokpin and Arko (2009) reported a significant positive relationship between board size and leverage for Ghanaian firms. Kyereboah-Coleman and Biekpe (2006) also found a significant positive association between board size and the total debt ratio and the short-term debt ratio. Similarly, Jensen (1986) and Hussainey and Al-Nodel (2009) found that board of directors' size has a positive influence on leverage so that the larger the board of directors size the higher the leverage level. In contrast, Wiwattanakantang (1999), Wen et al., (2002) and Al-Najjar and Hussainey (2009) found that board size is not significantly related to leverage.

In Malaysia, the majority (more than 75%) of the SMEs are managed by their owners and only some (less than 25%) are managed by outside managers and the number of directors are normally small, averaging between 2 to 3 persons only (Abdullah and Ab Manan, 2011). Hence the owners are the controlling shareholders who hold a higher or almost full proportion of board seats. With such small number of directors, decisions regarding debt financing can be made easier with less resistance compared with those firms having a higher number of directors. Therefore, we expect a negative relationship between board size and leverage. Based on the above arguments, the following hypothesis is developed.

H6 Board size is negatively related to leverage.

The same applies when a firm decides to apply the new accounting standard or the old accounting standard in preparing their financial statements. We expect that the higher the number of directors in a firm, the more difficult it is to reach a decision in choosing the best accounting standard for the firm due to wide differences in opinion of the board's members. Hence, we expect that the quality of information is higher (lower) when there is a smaller (bigger) number of members on the board. The higher (lower) quality of information will encourage (discourage) lenders to provide loan to the firm. Hence, the last hypothesis to be tested is:

H7 Board size moderates the relationship between quality of information and leverage.

3. Data and Research Methods

3.1. Data Collection

All data were collected from Companies Commission of Malaysia (CCM), which contains annual reports of Malaysian SME firms. The SME definition was taken from the SME Corporation Malaysia (SME Corp. Malaysia), which is a Central Coordinating Agency under the Ministry of International Trade and Industry Malaysia. Only manufacturing firms were selected as the selected variables can only be obtained from such firms. A firm is regarded as a manufacturing SME if it meets the following criteria: (1) has less than 200 employees or (2) has sales turnover not exceeding RM50,000,000; whichever is lower. Based on these criteria, we obtained an initial population of 570 SMEs. Our sample is restricted to 2013 as this was the starting year of the research project. Analogous to Mazila et al., (2013), we exclude firms that belong to the financial or governmental sector, because the additional requirements that apply to these sectors (e.g. capital requirements in the financial sector) are likely to impact on their financial structure. Further we remove those firms with missing values. From the final population of 370 firms, we randomly sampled 100 SMEs.

3.2. Variables

In this section, we provide an overview of the definitions of the dependent and independent variables that are used in our SME financial structure model. We measure financial structure (i.e. the dependent variable) based on a broad definition of leverage, which is defined as the ratio of total liabilities to total assets. Following previous studies (Chittenden et al., 1996; Mac an Bhaird and Lucey, 2010; Michaelas et al., 1999), the ordinary least-squares (OLS) regression model was used as the main statistical techniques in the current study. To test the hypotheses, and to identify potential relationships between the independent and dependent variables, the following regression model was developed:

$$LEV = \beta_0 + \beta_1(QINFO) + \beta_2(SIZE) + \beta_3(AGE) + \beta_4(AS) + \beta_5(PROFIT) + \beta_6(BS) + \varepsilon \quad (1)$$

Where:

LEV = Leverage

β₀ = Constant
 QINFO = Quality of info
 SIZE = Firm size
 AGE = Firm age
 AS = Asset structure
 PROFIT = Profitability
 BS = Board size; and
 ε = random error term

In order to examine the moderating effect of board size on the relationship, we added an interactive term in Equation 1. Hence, Equation 2 was designed as given below to evaluate the moderating effect of board size and quality of information on firm's leverage.

$$LEV = \alpha_0 + \alpha_1(QINFO) + \alpha_2(SIZE) + \alpha_3(AGE) + \alpha_4(AS) + \alpha_5(PROFIT) + \alpha_6(BS) + \alpha_7(BS*QINFO) + \epsilon \tag{2}$$

Where:

LEV = leverage;
 α₀ = constant;
 QUAL = quality of information;
 SIZE = size of firm;
 AGE = age of firm;
 AS = asset structure;
 PROF = profitability;
 BS = board size; and
 ε = random error term

The explanatory variables related to quality of information is defined below:

- Quality of information (QUAL) is measured by means of a dummy variable that takes a value of 1 if the firm filed its 2013 FS using the new accounting standard (MFRS), and 0 if the old accounting standard (PERS) of the FS was filed.

For the other explanatory variables, we use proxies that have been frequently employed in the literature:

- Firm size (SIZE) is measured as the natural logarithm of total assets (eg. Abor and Biekpe, 2009; Mazila *et al.*, 2013; Sheikh and Wang, 2011). As argued by Fama and French (2002), employing the log transformation allows controlling for possible non-linearity in the data (and the related problem of heteroskedasticity).
- Firm age (AGE) is defined as the natural logarithm of the number of years since incorporation of the firm (Caneghem and Campenhout, 2012; Cole, 2008). Analogous to Caneghem and Campenhout (2012), we use the log transformation because we expect that a 1 year difference in age is more important to the leverage of a young firm than to the leverage of an old firm.
- Asset structure (AS) is measured as the ratio of tangible assets (net fixed assets and inventories) to total assets (Abor and Biekpe, 2009; Sheikh and Wang, 2011)
- Profitability (PROF) is defined as return on total assets, being the ratio of earnings before interest and taxes (EBIT) to total assets (Michaelas *et al.*, 1999; Nurul *et al.*, 2011; Sogorb-Mira, 2005).
- Board size (BS) is defined as board of directors' size. Measurement of size of the board is measured by total number of director serves on the board of the company. This measurement is consistent with Abor (2007) and Bokpin and Arko (2009).

4. Results and Discussion

Table 1 presents the descriptive statistics. The high mean leverage of 92% can be explained by the high dependency of SMEs in Malaysia with banks in getting loans. The maximum leverage of 2170% indicates that some SMEs (nine companies) in our sample have large retained losses on their balance sheet (i.e. negative equity). 68% of the SMEs prepared their FS using the old accounting standard, while 32% of the SMEs opted the new accounting standard. With respect to asset structure, we find that, on average, tangible assets represent about 56% of total assets. This value is slightly higher than those reported in prior studies (e.g. Caneghem and Campenhout, 2012; Heyman *et al.* 2008; Sogorb-Mira, 2005). While average profitability is moderate (i.e. 3.51%), our sample firms shows an average total assets of RM16 million.

Table-1. Descriptive statistics

Variable	Mean	Std. Deviation	Minimum	Maximum
Panel A: descriptive statistics for the dependent and independent variables				
LEV	0.9227	2.2752	0	21.7
AS	0.5573	0.2766	0.07	0.99
PROFIT	0.0351	0.2257	-1.6	0.49
SIZE	16.075	1.9402	11.29	20.27
QINFO	0.3200	0.4688	0	1
AGE	3.0589	0.5717	1.79	4.58
BS	1.1937	0.4411	0.6931	2.3025
Type of Accounting Standard (QINFO)			# Obs.	% Obs.

Panel B: types of accounting standards adopted by Malaysian SMEs

Old accounting standard (PERS)	68	68
New accounting standard (MFRS)	32	32

LEVERAGE total liabilities/total assets; QINFO dummy variable that takes a value of 1 if the firm filed its FS using the new accounting standard, and 0 otherwise; SIZE $\ln(\text{total assets})$; AGE $\ln(\text{number of years since incorporation of the firm})$; AS tangible assets/total assets; PROFIT earnings before interest and taxes/total assets; BS \ln of number of board members

Table 2 presents the correlation matrix. Quite surprisingly, the quality of information is negatively related to leverage (at the 1% significance level), which is inconsistent with H1. The negative correlation between the quality of information and leverage might (partially) reflect the impact of firm size, given that the legal criteria related to FS format is defined in terms of firm size. The strong positive relationship of the information quality with firm size, and the negative relationship of firm size with leverage (all statistically significant at the 1% level), are consistent with this explanation. Table 2 also shows that the correlation between leverage and the other independent variable, namely profitability, also confirm with the predicted sign and that it attains statistical significance at the 1% level. As for the independent variables, the highest correlation coefficient value is only 0.784, which is between quality of information and the natural log of total assets Gujarati (2003) suggests that harmful levels of multicollinearity are present when bivariate correlation is more than 0.80. The use of the natural logarithm for three variables (SIZE, AGE and BS) also limit the heteroscedasticity problems. The table provides strong justifications that multicollinearity does not appear to be a problem in this study, and neither are the heteroscedasticity and linearity.

Table-2. Correlation coefficients

	Lev	AS	PROFIT	QINFO	SIZE	AGE	BS
Lev	1						
AS	-0.097	1					
PROFIT	-0.331*	-0.131	1				
QINFO	-0.161	0.067	0.034	1			
SIZE	-0.339*	0.107	0.151	0.784*	1		
AGE	-0.105	0.011	0.036	0.240*	0.418*	1	
BS	-0.112	0.043	-0.056	0.660*	0.628*	0.329*	1

Absolute values of t -statistics are reported in parentheses

*Statistically significant at the 1% level

Results for our OLS regression model are reported in Table 3. Both models in Table 3 indicate that coefficients for two independent variables (i.e. firm size and profitability), attain statistical significance at the 1% level. This observation is supported by the joint F-test, which indicates that, from a statistical point of view, all variables need to be considered in our models.

Unlike results based on bivariate correlations, coefficients for the variable related to information quality has the predicted signs in both models. This change in sign for the quality variable provides support for our earlier argument that this variable also (partially) capture a size effect. However, the observed insignificant positive coefficient is inconsistent with H1 and does not support the view that lack of (quality) information inhibits firms from using external funds because it increases the cost of external funding.

Table-3. Regression results

	Model 1	t -values	Model 2	t -values
Intercept	9.637	(3.58)*	9.764	(3.164)*
AS	-0.097	(-1.044)	-0.098	(-1.041)
PROFIT	-0.278	(-2.901)*	-0.276	(-2.779)*
QINFO	0.205	(1.278)	0.175	(0.458)
SIZE	-0.487	(-2.918)*	-0.491	(-2.825)*
AGE	0.05	(0.489)	0.05	(0.475)
BS	0.03	(0.232)	0.021	(0.126)
QINFO*BS			0.041	0.086
Adjusted R ²	22.50%		22.50%	
F (p -value)	4.494	0.000	3.812	0.001
Number of obs.	100		100	

Absolute values of t -statistics are reported in parentheses

*Statistically significant at the 1% level

Besides the statistical significance, it is also important to address the economic significance of our findings. Based on the magnitude of the coefficients in both models, we see that providing more information is not associated with a substantially higher leverage ratio. *Ceteris paribus*, the difference in leverage between SMEs filing their FS using the new accounting standard and those using the old accounting standard ranges between 17.5 (i.e. based on model 2) and 20.5 (i.e. based on model 1) percentage points, which is not substantial. Based on the aforementioned observation, we conclude that the financing decision made by SMEs is not being influenced by the choice of new or old accounting standard to prepare their FS.

The results on the financial structure of Malaysian SMEs reported in this study show a significant negative coefficient for firm size in both regressions (which is consistent with H2). Bearing in mind that we consider a natural log transformation (of total assets), the magnitude of the coefficient is negligible, but higher than those reported by [Caneghem and Campenhout \(2012\)](#) and [Heyman et al. \(2008\)](#) (based on their cross-sectional OLS regression) in the Belgian setting. 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 2), firm size is significantly positively related to firm age. Thus, one potential explanation for the observed negative relationship is that older firms have more internally generated funds (i.e. retained profits) that are subsequently used to finance the firm. Younger firms have more difficulties in obtaining debt and will therefore be more dependent upon other types of liabilities (e.g. trade credit, advance payments from clients etc.).

In line with the argument that more mature firms will rely more on internal financing, we observe an insignificant positive coefficient for firm age (which is inconsistent with H3). However, the positive sign support the TOT prediction of a positive relationship because older firms are more reputed. Hence, they will obtain more debt to increase their firms' value. In a similar vein, and consistent with H5, we observe a significant negative relationship between leverage and profitability. The magnitude of the coefficient for profitability in both models is quite small and indicates that, *ceteris paribus*, a small increase in return on assets results in almost an equivalent decrease of leverage.

The insignificant negative coefficient on the asset structure variable is inconsistent with H4 (and TOT) and does not support the view that firms with more tangible assets will have easier access to external debt. The small coefficient for asset structure in both models confirms that collateral is not essential for SMEs in mitigating agency problems between the owner and the lender. The results relating to board size were not significant, which were inconsistent with H6. This fact is supported by the extant literature on corporate governance which suggest that large boards are counterproductive in terms of effective decision-making ([Tarus and Aime, 2014](#)) and monitoring management. Our results indicate that firms with bigger boards tend to have higher leverage, though not to a significant extent.

Finally, the moderating effect of board size on the association between information quality and leverage decision proved to be not significant (which is inconsistent with H7). This finding noticeably infers that board size does not moderate the positive association between information quality and leverage. In other words, board size will not moderate the firm's leverage decision by choosing debt as their financial needs.

5. Conclusion

Based on a restrictive sample of Malaysian SMEs, we have formally tested the impact of quality of information on SME financial structure. In line with traditional asymmetric information arguments, our results show that information quality is positively (but not significant) related to SME leverage. Our results therefore do not support the view that lack of information and low information quality inhibit firms from using external funds. SMEs with more extensive information and/or higher information quality do not necessarily rely more heavily on debts, which is inconsistent with the view that these firms have lower cost of external capital. Due to the insignificant results, it is not sufficient to suggest that Malaysian SMEs are able to substantially reduce the cost of external financing by providing more information and/or higher quality of information. It is generally acknowledged that SMEs are financially constrained because they face difficulties in attracting external debt (i.e. compared with large firms). Whereas some of the disadvantages related to attracting external debt are beyond management's control (e.g. SMEs are too small to turn to capital markets, SMEs face higher cost of debt because they are considered to be more risky etc.), management decides on the quality of information that is disclosed, and even though our results suggest that they are not yet able to influence their access to external debt, providing high quality financial statements in continuous manner will convince creditors to provide credit to these SMEs in the future.

Secondly, because the results for some of our control variables are consistent with prior studies, we conclude that the financial behaviour of Malaysian SMEs is comparable to that of SMEs in other developed countries. Specifically, we find that leverage is negatively related to firm size and profitability. Last but not least, our findings indicate that the traditional capital structure theories (i.e. POT, TOT and agency theory) are partially relevant in explaining Malaysian SME capital structures. For example, whereas the observed negative relationship between profitability and leverage is consistent with POT, the significant negative coefficient for firm size provides support for agency theory. However, the negative relationship between asset tangibility and leverage is not consistent with agency theory. Therefore, as argued by [Myers \(2001\)](#), we confirm that no single theory gives a general explanation of firms' financing strategies.

A limitation of the current study is that, because of data restrictions, the analyses are based on data for a single year. As a result, an interesting avenue for further research would be to examine the factors that could influence capital structure over a period of time in the Malaysian setting. Another stream of research is to examine the impact of corporate governance variables on listed SMEs since more data are available for such firms compared to private firms.

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