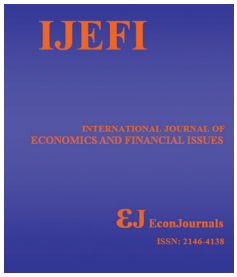

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The Relationship between Ownership Structure, Firm Specific Characteristics and Capital Structure: Evidence from Malaysian Middle-capital Public Listed Firms

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ABSTRACT

This study investigates the relationship between ownership structure and firm specific characteristics with capital structure of Malaysian middle-capital pubic listed firms. Although there are many studies conducted on capital structure, very few examine the connection between ownership concentration and ownership dispersion with capital structure particularly in the Malaysian market. By employing a total of 38 middle-capital firms covering period from 2008 to 2012, the results show that debt level in firms with high ownership concentration is significantly different from firms with low concentration level. It is also found that ownership concentration possess a negative relationship with leverage ratio, the measurement for capital structure. This suggests that debt is less likely to be used as monitoring mechanism in highly concentrated firm. This practice could reduce debt related financial distress cost, which in turn lower agency cost although it promotes agency cost related to managerial opportunistic behaviour. The findings might help investors to understand more about capital structure and help them to judge corporate governance practice of firms based on the level of ownership concentration and choice of capital structure.

Keywords: Ownership Concentration, Ownership Dispersion, Capital Structure, Malaysia
JEL Classification: G32

1. INTRODUCTION

Capital structure choice is one of the most important decisions making for a firm because it can affect shareholder's earnings and firm's value. A heavy reliance on the debt financing would give weight on the firm's risk profile and increase firm's bankruptcy costs. Meanwhile, favouring equity issuance and avoiding debt would send wrong signals to investors about firm's financial status and also increase the possibility of hostile takeover. At the international level, a number of studies examine the relationship between characteristics of firms and their choice of capital structure. Most of the studies focus on European firms (Arrondo and Gomez-Anson, 2003; Bancel and Mittoo, 2002, 2004; Boubaker, 2007), United States of America firms (Baker and Wurgler, 2002; Berger et al., 1997) and some of them focus on East Asian firms (Booth et al., 2001; Deesomsak et al., 2004; La Porta et al., 1999). These studies highlight that capital structure decisions are influenced by firm specific characteristics such as profitability, size, asset tangibility, and liquidity.

These studies nevertheless, provide inconclusive findings regarding the association between firm specific characteristics and capital structure. Furthermore, these studies do not focus on specific sizes with regard to the market capitalization of their sample. The variations in the type of sample firms, markets, and sample periods used in prior studies motivate this study to further examine the relationship between firm specific characteristics with capital structure using Malaysian middle-capital firms' data.

In addition, this study also investigates the effect of ownership concentration and ownership dispersion on leverage level of Malaysian middle-capital firms. This is because, Claesens et al.,

(2002) report that Malaysian firms have high level of ownership concentration. Ownership concentration is defined as fraction of top 5 largest shareholding of the firm. Empirical evidence by Abdullah (2006) highlights that on average, 36% of Malaysian firms' shares are held by single largest shareholder. Based on agency theory, large shareholders supposed to have total control over firm's management and governance thus would reflect a high favour of using debt in firm's capital structure as a means to control agency problem.

Meanwhile, dispersed ownership structure or dispersed firm has only a few, if any large shareholder in the firm. Dispersed firm usually has higher number of shareholders with smallholdings and these minority shareholders are less likely to involve themselves in firms' management. The lack of shareholder's involvement in the firm has resulted in manager having too much power in hand with no or less monitoring than necessary to control their actions. Entrenched managers decrease debt financing in order to avoid lender's monitoring and maintain their position in the firm. Therefore, a decrease in the number of large shareholder would increase manager's control power over firm and decrease the level of leverage in firm's capital structure.

To the best of our knowledge, there are limited studies that consider the association between ownership concentration and ownership dispersion with leverage level in Malaysia. By exploring these two areas and their relationship, this study might be able to highlight the situation regarding rights of shareholder as the entitled owner of the firm. Thus, the finding will shed some light on sign of entrenchment acts and expropriation by managers.

The remainder of this study is organized as follows. Section 2 discusses the related literature. Section 3 describes methodology. Section 4 presents the empirical findings and Section 5 concludes the study.

2. LITERATURE REVIEW

2.1. Capital Structure Theories

Three related dominant theories that are important and extensively reviewed in prior studies are agency theory, trade off theory and pecking order theory. In this section, related literature regarding the determinants of capital structure and literature on the relationship between ownership structure and capital structure are discussed. Agency theory developed by Jensen and Meckling (1976) suggest that capital structure can be manipulated to eliminate or at least reduce agency costs.

The trade-off theory proposed by Modigliani and Miller (1963) find that theoretically, debt increase firm value because of the interest tax shield. However, increase in debt means the firm has committed to a greater bankruptcy costs and excessive use of debt would bring more harm to the firm when the bankruptcy cost is greater than the tax saving advantage. This explain the trade-off theory of capital structure that states the amount of tax savings will just be offset by the same amount of bankruptcy costs. Although exact target debt may not be possible to determine, firms having high and consistent profitability with lot of tangible asset to offer as collateral security should be able to have a higher debt ratio. According to Myers and Majluf (1984), firms that recognize this trade off theory would set their target debt then gradually moves toward the target.

Pecking order theory developed by Myers and Majluf (1984) was based on the assumption that firm will mostly use internal financing before resolving to external financing and would prefer debt to equity if external financing is used. This creates the order of preferable financing: First would be retained earnings, then debt and the final option when debt capacity reached its limit would be equity. Another assumption made that explains this order is because compared to outsiders, managers have greater knowledge about the firm's financial information.

2.2. Ownership Structure and Capital Structure

Agency theory postulates that leverage is one of the effective mechanisms to control agency problem. In corporate world, manager is the agent appointed by shareholders and given the authority to make decision on how to operate the firm in a way that could maximize the shareholder's wealth. The problem arises when managers make corporate decision based on their best interest instead of the shareholders'. One way to alleviate agency cost is by injecting debt in firm's capital structure which would provide outside monitoring by lenders (Agrawal and Nagarajan, 1990; Mehran, 1992; Berger et al., 1997; Du and Dai, 2005). This is because debt could help shareholders to control the actions and behaviour of managers. Firms which have high ownership concentration are more likely to depend on leverage to monitor or control managers' behavior. Agrawal and Nagarajan (1990), Mehran (1992), Berger et al., (1997), Du and Dai (2005) and Cespedes et al., (2010) mutually agree that high ownership concentration leads to a high intake of leverage.

Another main reason for shareholders to favour debt financing is to protect their control rights as the owner of the firm. Major shareholders avoid issuing new equity to protect their voting rights and maintain their position as controlling shareholder. They rather use debt financing than increasing the risk of losing control and the possibility of hostile takeover. Therefore, agency theory predicts that high level of ownership concentration which reflects shareholders' control on the firm will increase the level of leverage in the firm's capital structure.

Similarly, firms with dispersed ownership shows a manager's preferences over equity financing rather than leverage in order to avoid scrutiny monitoring from the debt holders. Antoniou et al., (2008) who find lower leverage ratio for the U.S. and U.K. firms emphasize that managers prefer for equity financing in dispersed ownership structure.

Empirical studies on ownership concentration highlight that high concentrated firms tend to have higher debt level (Agrawal and Nagarajan, 1990; Mehran, 1992; Berger et al., 1997; Mahrt-Smith, 2005; Du and Dai, 2005). Despite positive results are found between ownership concentration and debt level, there are some empirical findings that document an opposite relationship (Wiwattanakantang, 1999; Driffield et al., 2007; King and Santor,

2008). Shleifer and Vishny (1986) highlight the influence of large investors such as banks or institutional investors in monitoring activities. They argue that firms with more concentrated ownership are expected to have less agency costs related to managerial opportunistic behaviour and thus, managers have less need to issue debt as their action will be monitored by the concentrated shareholders. Wiwattanakantang (1999) who examines 363 non-financial listed firms in Thailand suggests that a concentrated ownership structure induces a higher level of monitoring. This in turn implies the reduction in managerial discretion. Driffield et al., (2007) report that among East Asian firms, Malaysian firms show a negative relationship between ownership concentration and leverage ratio. Therefore, debt financing which is used to mitigate the moral hazard problem is less widely adopted in highly concentrated firms.

On the other hand, firms with dispersed ownership structure usually have larger number of shareholders with small shareholdings and these minority shareholders are less likely to involve themselves in firms' management. The lack of shareholder's involvement in the firm has resulted in manager having too much power in hand with no or less monitoring than necessary to control their actions. The extent to which managers are disabled to be disciplined from full range of corporate governance and control mechanism is referred to the managerial entrenchment hypothesis (Berger et al., 1997). Entrenched managers would decrease debt financing in order to avoid lender's monitoring and subsequently maintain their position in the firm. To sum up, it is expected that a small number of large shareholder would increase manager's control power over firm and thus, decrease the level of leverage in firm's capital structure. Given both positive and negative relationship documented between ownership concentration and ownership dispersion respectively to debt level, this study hypothesized that:

H_{1a}: There is a relationship between ownership concentration and leverage ratio of Malaysian middle-capital firms.

H_{1b}: There is a relationship between ownership dispersion and leverage ratio of Malaysian middle-capital firms.

2.3. Firm Specific Characteristics and Capital Structure

The pecking order theory posits that if firm issues equity to finance a project, it would signals that management is not confident enough about the successful rate of the project. Therefore, issuance of share is bad news but if debt financing is used on the project, it is considered as good news. This is because debt financing signals that the management is confident about serving the debt in the future, which means the project have a promising prospect. In this case, debt is preferred over shares in order to attract investors. This theory assumes that managers know more about the firm's capabilities and in order to avoid speculation on the firm's financial status, the management might resolve to finance project by using retained earnings as retained earnings is the cheapest form of financing.

The empirical evidences on profitability and capital structure indicate that profitability will have a negative relationship with the leverage ratio because high profitable firms will have more internal funds available. Thus, firms would prefer internal funding rather than debt financing when they have the excess internal funding sources (Deesomsak et al., 2004; Nadaraja et al., 2011; Nurul et al., 2011). Thus, hypothesis regarding the relationship between profitability and leverage ratio is as follows:

H_2: Profitability of Malaysian middle-capital firms has a negative relationship with leverage ratio.

In the aspect of firm size, the trade-off theory explains that larger firms have higher target debt than smaller firms. Large firms exhibit stronger growth, more diversified, consistent profitability, and possess more assets than small firm. The financial profiles for large firms tend to outperform small firms' financial profile. Thus, the bankruptcy costs for large firms are much lower than small firm. Therefore, an increase in firm size will increase the debt capacity of the firm. Most of researches have confirmed this theory and reported a positive relationship between firm size and leverage ratio (Deesomsak et al., 2004; Nadaraja et al., 2011; Noriza et al., 2011; Nurul et al.,2011; Nabilah et al., 2012; Fahmi and Noryati, 2013; and Mazila et al., 2013). These studies agree that firm size is an important determinant of capital structure. Thus, it is hypothesized that:

H_3: Size of Malaysian middle-capital firms has a positive relationship with leverage ratio.

Asset tangibility such as fixed asset is regarded as one of the important determinants of firms' capital structure by most of prior literatures. Deesomsak et al., (2004), Suhaila and Wan (2008), Nadaraja et al., (2011), Nurul et al., (2011), Nabilah et al., (2012), Fahmi and Noryati (2013) and Mazila et al., (2013) report that asset tangibility has a significant positive relationship with leverage ratio. In this respect, fixed asset function as the collateral to creditors in exchange of debt granted. A firm with large amount of fixed asset can borrow at relatively lower rate of interest because creditors feel more secure with the guarantee assets or collateral promised by the firm if they fail to pay back the debt. Myers (1977) states that tangible asset such as fixed asset can support a higher debt level compared to intangible asset such as growth opportunities. Therefore, the more tangible asset firms possess, the greater the firms' ability to increase their debt level. The trade-off theory suggests a positive relationship between asset tangibility and leverage ratio. Thus, the hypothesis for asset tangibility is as follows:

H_4: Asset tangibility of Malaysian middle-capital firms has a positive relationship with leverage ratio.

In the aspect of liquidity, the trade-off theory postulates that an increase in liquidity will increase the ability of firms to borrow more due to high level of cash or liquid assets to serve the interest and principal payment on time. High liquidity ratio allows firm to have high leverage ratio and this positive relationship is confirmed by Nadaraja et al., (2011), Suhaila and Wan (2008) and Mazila et al., (2013). However, Deesomsak et al., (2004) find that Malaysian firms have a negative relationship between liquidity and leverage ratio. The negative relationship describes the pecking

order theory in which when the firms' liquidity is high, the firms prefer to use internal funds to finance their operation rather than risking their cash or liquid assets to serve debt. Based on the arguments, the hypothesis 6 is as follows:

H_6: There is a relationship between liquidity and leverage ratio of Malaysian middle-capital firms.

As for growth opportunity, the relationship between growth opportunity and capital structure can be explained by agency and trade off theory. Trade off theory postulates that firms with more investment growth opportunities will borrow less to avoid committing themselves to debt servicing as intangible asset could not be used as collateral. Similarly, according to agency theory, the underlying investment problem is more likely to occur due to large proportion of firms' value is in the form of growth opportunities. Thus, in order to reduce the agency problem, these firms is less likely to use debt. Significant negative relationship is found in these studies (see for example Bradley et al., 1984; Gaud et al., 2005; Moh'd et al., 1998; Rajan and Zingales, 1995). Therefore, it is hypothesized that:

H_7: Growth opportunity of Malaysian middle-capital firms has a negative relationship with leverage ratio.

3. METHODOLOGY

3.1. Sample Selection

This study uses list of FTSE Bursa Malaysia Mid 70[1] Index component firms which covers an observation period of 5 years from 2008 to 2012. The index is a free float adjusted market-capitalisation weighted index representing the performance of the middle largest Malaysian firms, which qualify size, free float and liquidity screens (FTSE Monthly Report, 2014). The list[2] consists of 70 middle-capital firms from various sectors of the Malaysian economy. Selection process begins with an elimination of firms that involve in financial trading activities and financial institution such as banks, bank holdings firms and REIT as these types of firms are regulated and use a different accounting procedure. The following step involves the elimination of firms that falls under Bursa Malaysia's practice note (PN) 3, PN4 or PN17 status during the study period. Next, observations of firms with all-equity financed are also excluded from sample. The final process is the elimination of firms with missing data such as the absence of financial data during the 5 year study period. The final sample consists of 38 firms and a total of 190 observations.

Table 1 classifies companies according to seven sectors which are infrastructure project companies (IPC), construction, consumer, industrial products, plantation, properties and trading and services. The highest percentage of sample firms is from Trading and Services which is accounted about 40%, while firms in IPC is the lowest percentage in the sample (2.6%).

Table 1: Profile of sample firms according to Bursa Malaysia sectors

Industry	Number of firm (%)
IPC (electronic)	1 (2.6)
Construction	3 (7.9)
Consumer	2 (5.3)
Industrial products	7 (18.4)
Plantation	6 (15.8)
Properties	4 (10.5)
Trading and service	15 (39.5)
Total	38 (100)

3.2. Model Specification

The model which is modified from Rajan and Zingales (1995), Deesomsak et al., (2004), and Booth et al., (2001) is specified as follows:

$$LEVERAGE_{it}=\beta_0+\beta_1 PROFIT_{it}+\beta_2 SIZE_{it}+\beta_3 TANGIBILITY_{it}+\beta_4 LIQUIDITY_{it}+\beta_5 GROWTH_{it}+\beta_6 TOP_{it}+\beta_7 DISPERSE_{it}+\varepsilon$$

Where:

$LEVERAGE_{it}$=Leverage of firm *i* at time *t*, is measured by using the ratio of book value of total debt (short and long term debt) to total equity;

$PROFIT_{it}$=Profitability of firm *i* at time *t*, measured by ratio of operating income to total asset;

$SIZE_{it}$=Firm size of firm *i* at time *t* is measured by logarithm of total sales;

$TANGIBILITY_{it}$=Asset tangibility of firm *i* at time *t*, measured by ratio of fixed asset to total asset;

$LIQUIDITY_{it}$=Liquidity of firm *i* at time *t*, computed by ratio of current asset to current liabilities;

$GROWTH_{it}$=Growth opportunity of firm *i* at time *t*, computed by market to book ratio;

TOP_{it}=Ownership concentration variable, measured by the fraction of top five largest shareholding of firm *i* at time *t;*

$DISPERSE_{it}$=Ownership dispersion variable, measured by natural log of total number of shareholders of firm *i* at time *t* and;

ε=Error term.

The equation consists of five firm specific variables (profitability, size, asset tangibility, liquidity, and growth opportunity) and two ownership structure variables. Previous literature uses numerous proxies to measure ownership. In this study, two proxies are used

1 The 70 mid cap firms are the next 70 firms in FTSE Bursa Malaysia EMAS Index (FBMEMAS), after the 30 largest firms in FBMEMAS. The justification for excluding the first top 30 largest stocks in terms of market capitalization is because these firms are monopolized by the Institutional ownership. The remaining of the constituents in FBMEMAS is considered as small capital companies and are not listed on the FTSE Top 100 Index. Thus, this study focuses on 70 mid cap firms to avoid inclusion of outliers of too big or too small firms in terms of size and market capitalization.

2 The list of 70 mid-cap firms is extracted from Malaysia-mid-70-components list http://www.investing.com/indices/ftse). This website provides an up-to-date list with only four hours delayed information.

to represent ownership structure. The first proxy is Herfindahl index where total shareholding of top five largest shareholders is computed. This proxy is used by Nor and Sulong (2007), Khan (2006) and Suto (2003). Another proxy is ownership dispersion, an inverse relationship with ownership concentration. It is measured by the natural log of total number of shareholders. This study follows Rozeff (1982) who states that theoretically, if the firm's shares are held by a greater number of shareholders, this will suggest a more dispersed ownership or low level of ownership concentration while less number of shareholders will indicate a high ownership. The use of natural log of number of outstanding shareholders allows this study to neutralize the differences in the number of shareholders between firms, where this method is also used by Moh'd et al., (1998).

4. EMPIRICAL FINDINGS

4.1. Descriptive Statistics

Table 2 presents the descriptive statistic of all variables used in this study. From the table, it shows that Malaysian middle-capital firms have an average of the following variables: LEVERAGE of 24.9%, PROFIT of 7.4%, SIZE of 6.121, TANGIBILITY of 39.9%, LIQUIDITY of 1.871, GROWTH of 1.631, TOP of 56.2% and DISPERSE of 9.132. An average leverage ratio of 25% is similar to the 24% reported by Ganguli (2013) in his study on Indian middle-capital firms.

4.2. Univariate Analysis

Table 3 provides the independent t-test of the mean of subsample groups of ownership structures proxies: Ownership concentration (shown in Panel A) and ownership dispersion (shown in Panel B). In Panel A, sample firms are divided into two groups based on the median value of 56.6% in percentage of shareholding for top 5 largest shareholders: Highly concentrated firms (firms with higher than median ownership concentration) and low concentrated firms (firms with lower than median ownership concentration). Independent t-test is performed to check whether two groups are different. Results show that the significance level is small (P = 0.0083), thus equal variance not assumed t-test statistic should be used. It can be concluded that the leverage level for the high concentrated firms and low concentrated firms are significantly different. Similar test is also conducted for examining the difference between high and low ownership dispersion and the results is reported in Panel B. The results show that sample with high ownership dispersion is significantly different from low ownership dispersion. This also implies that leverage level of the two groups is different.

4.3. Correlation Analysis

Before a multivariate analysis is performed, multicollinearity tests and correlation test are conducted. Table 4 shows a correlation coefficient for all variables. The variables are considered to have a strong relationship between each other when their correlation coefficient value is more than 80%. The highest correlation coefficient value is −0.522, which is between profitability and the natural log of total shareholders. Overall, multicollinearity does not appear to be a problem in this study.

4.4. Multivariate Analysis

Table 5 presents results of four different models using ordinary least squares (OLS) and fixed effect estimation. A fixed effects model is used to control for the unobservable behaviour of firms' specific characteristics, such as management quality and firm policies that may affect the capital structure decision. Model 1 and Model 2 report the results of OLS regression, while Model 3 and Model 4 exhibit the results of fixed effect estimations. Results of OLS regression and fixed effect estimation show that three firm specific variables, PROFIT, SIZE and TANGIBILITY are statistically significant in all models. In this respect, firm size (SIZE) and asset tangibility (TANGIBILITY) are found to be significantly positive with leverage ratio, while the coefficient for profitability (PROFIT) exhibits a negative correlation with leverage ratio.

The positive and significant coefficient of SIZE is consistent with the trade-off theory that suggests larger firms have higher target debt level than smaller firms. This means that an increase in firm size will increase the debt capacity of the firm. Meanwhile, significant positive coefficient of TANGIBILITY suggests that firm with large amount of fixed asset can borrow at relatively lower rate of interest because creditors feel more secured with the guaranteed assets or collateral promised by the firm if they fail to pay back the debt. This result supports all of prior studies (see for example Fahmi and Noryati, 2013; Mazila et al., 2013; Nabilah et al., 2012; Deesomsak et al., 2004; Nadaraja et al., 2011; Noriza et al., 2011; Nurul et al., 2011).

Profitability (PROFIT) has a negative relationship with leverage ratio which is consistent with the pecking order theory. A significant negative relationship infers that high profitable firms will have more internal funds available, and this implies that Malaysian middle-capital firms prefer internal funding when they have an excess of internal funding sources. The results are consistent with Deesomsak et al., (2004), Nadaraja et al., (2011), Noriza et al., (2011), and Nurul et al., (2011) who mutually agree that profitability negatively influence the Malaysian firms' capital structure.

Table 2: Descriptive statistics

	Variable							
	Leverage	Profit	Size	Tangibility	Liquidity	Growth	TOP	Disperse
Mean	0.249	0.074	6.121	0.399	1.871	1.631	0.562	9.132
Minimum	0.0003	−0.163	4.862	0.039	0.311	0.240	0.168	7.129
Maximum	0.772	0.372	7.201	0.883	10.127	7.230	0.872	11.147
Median	0.244	0.066	6.091	0.397	1.657	1.505	0.566	9.132
Standard deviation	0.159	0.072	0.481	0.195	1.196	0.980	0.164	0.883

Models that incorporate ownership concentration variable (TOP) are described in Model 1, Model 3 and Model 4, while model that incorporate the ownership dispersion variable (DISPERSE) is shown in Model 2. The models reveal contradict results between the two proxies. TOP is statistically and negatively significant, while DISPERSE is insignificant. The negative and significant result of ownership concentration (TOP) is consistent with the view that shareholders will gain less benefit from debt owing to larger monitoring roles by major investors. In similar vein, results from this study support managerial entrenchment hypothesis which argues that shareholders with low ownership concentration are not able to play an active role in management. Thus, this would lead to managerial entrenchment behaviour. Managers for this type of company prefer low debt level than optimal debt level due to a desire to secure their human capital and avoid performance pressures related to commitments to disgorge large amount of cash. The findings of this study does not support premise of agency theory which postulates that debt reduces agency cost by bringing in extra monitoring over management.

Table 3: Results of two groups mean comparison test

Sub-sample group	Mean	Independent t-test	
		t-stat	P value
Panel A: Top 5 largest shareholding (TOP)			
Ownership concentration of >56.6%	0.2214	2.4166	0.0083***
Ownership concentration of <56.6%	0.2763		
Panel B: Number of category of shareholders (Disperse)			
Ownership dispersion >9.132	0.2899	3.6874	0.0001***
Ownership dispersion of <9.132	0.2077		

***P<0.01

5. CONCLUSION AND RECOMMENDATION

This study investigates the relationship between firm specific characteristics and ownership structure with capital structure of middle-capital firms listed in Bursa Malaysia during the period of 2008 to 2012. In specific, this study analyses the effect of leverage level in high concentrated and low concentrated firms. The leverage level is much lower in highly concentrated firms. The findings provide new insights into the link of corporate governance practice and debt financing as substitutes to reduce agency cost. The findings also reveal that firm size and asset tangibility positively influence the leverage level while profitability negatively influences the leverage level of middle-capital firms in Malaysia.

This study examines only two proxies for ownership structure, which are concentrated ownership and dispersed ownership. Future research could explore other perspectives that are more relevant to Malaysian context such as family ownership, managerial ownership, outsiders' ownership, and foreign ownership to find their relationship with capital structure. Finally, a larger sample of Malaysian firms with longer period of study or at least cover

Table 4: Pearson's correlation analysis

	Leverage	Profit	Size	Tangibility	Liquidity	Growth	TOP	Disperse
Leverage	1.000							
Profit	−0.354***	1.000						
Size	0.282***	−0.242***	1.000					
Tangibility	0.214	0.069	−0.255	1.000				
Liquidity	−0.304	0.242	−0.279	−0.263	1.000			
Growth	−0.073	0.304***	0.117	−0.014	0.058	1.000		
TOP	−0.197***	0.071	0.044	−0.021	0.161**	−0.054	1.000	
Disperse	0.262***	−0.522***	0.444***	−0.178**	−0.163**	−0.181**	−0.147**	1.000

***. **Indicates significance level of 1% and 5%, respectively

Table 5: Regression result

Independent variables	Dependent variable: Leverage			
	Model 1(OLS)	Model 2 (OLS)	Model 3 (fixed effects)	Model 4 (fixed effects)
Const	−0.260 (0.108)	−0.345 (0.063)	−0.2655 (0.1053)	0.2495 (0.1249)
Profit	−0.599*** (0.000)	−0.586*** (0.001)	−0.5996*** (0.0002)	−0.3336** (0.0168)
Size	0.094*** (0.000)	0.079*** (0.002)	0.0980*** (0.0001)	0.0560*** (0.0060)
Tangibility	0.234*** (0.000)	0.227*** (0.000)	0.2392*** (0.000)	0.3760*** (0.000)
Liquidity	−0.007 (0.462)	−0.012 (0.212)	−0.0064 (0.5059)	−0.0224*** (0.0046)
Growth	−0.004 (0.702)	0.000 (0.983)	−0.0026 (0.8153)	−0.0170 (0.0545**)
TOP	−0.171***(0.006)		−0.1796*** (0.0047)	−0.1849*** (0.0003)
Disperse		0.009 (0.534)		
Year dummy	No	No	Yes	No
Industry dummy	No	No	No	Yes
Number of observation	190	190	190	190
Adjusted R^2 (%)	26.79	23.88	25.73	55.41
F-value	12.53*** (0.000)	10.88*** (0.000)	7.55*** (0.000)	20.58*** (0.000)

*** and **denotes significance level of 1%, 5% and 10% respectively, $LEVERAGE_{it}$ is measured by ratio of book value of total debt (short and long term debt) to total equity, $PROFIT_{it}$ is measured by ratio of operating income to total asset, $SIZE_{it}$ is measured by logarithm of total sales, $TANGIBILITY_{it}$ is measured by ratio of fixed asset to total asset, $LIQUIDITY_{it}$ is computed by ratio of current asset to current liabilities, GROWTHit is measured by ratio of market to book ratio, TOPit is measured by the fraction of top five largest shareholding, $DISPERSE_{it}$ is measured by total number of shareholders

a certain period study such as recession phase, booming phase, recovery phase and stable phase could also be employed in the future research.

Since the observation of this study focuses solely on Malaysian middle-capital firms, the finding of this study could not represent the current practice of Malaysia's corporate governance in other capital sizes of firms. Further study could be done on examining the practice of Malaysia's corporate governance (MCCG 2012) that focuses on the area of shareholder's protection using different approach, method and variable. This could include an extension to a study that measure shareholders' rights' as in Gompers et al. (2003).

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