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Ownership Concentration and Debt Structure: Evidence from Top 100 PLCs in Malaysia

Neshaleni S. Paramananthama, Irene Wei Kiong Tingb, Qian Long Kwehc

Abstract: *This study examines the impact of ownership concentration on debt structure. Based on market capitalisation, we obtained financial and governance data from Top 100 public listed companies in Malaysia for the period 2011-2015. Ordinary least squares and fixed-effect panel models were employed for examining data. The regression results showed that ownership held by the top five shareholders significantly and negatively affected long term debt and total debt ratios. The results remain qualitatively similar in both estimations using the ordinary least squares and fixed-effect panel models. In summary, this study offers some insights into how concentrated ownership influence corporate debt structure.*

Keywords: Ownership concentration; Debt structure; Malaysia; 100 public listed companies
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1. Introduction

Concentrated ownership is common throughout the world and it refers to the amount of stock owned by individual investors and large-block shareholders (investors that hold at least 5 per cent of equity ownership within the firm). In publicly traded firms, large block holders are normally institutional investors in the form of pension funds and mutual funds. (Claessens, Djankov, & Lang, 2000; Lo, Ting, Kweh, & Yang, 2016). La Porta, Lopez-de-Silanes, and Shleifer (1999) examined organisations in 27 countries characterised by high ownership concentration. Claessens, Djankov, and Lang (2000) meanwhile found t that 66% of organisations in nine East Asian countries they examined are under substantial

[a] Faculty of Industrial Management, Universiti Pahang Malaysia, 26300 Gambang, Pahang, Malaysia. *Email: neshaleni@gmail.com*
[b] Corresponding Author. Faculty of Industrial Management, Universiti Pahang Malaysia, 26300 Gambang, Pahang, Malaysia. *Email: irene@ump.edu.my*
[c] Faculty of Management, Canadian University Dubai. P.O. Box 117781, 1st Interchange, Sheikh Zayed Road, Dubai, United Arab Emirates. *Email: qlkweh@gmail.com*

shareholders' control. Earlier studies have indicated that ownership structure affects debt structure (for example, de La Bruslerie & Latrous, 2012).

Ownership concentration enables the controller to have massive influence in policy-making, particularly in the capital structure decision (Liu & Sun, 2010; Bany-Ariffin, Mat, & McGowan, 2010). Previous researches have emphasised the association between ownership concentration and corporate financing, with particular focus on capital structure decison (Bunkanwanicha, Gupta, & Rokhim, 2008; Liu, Tian, & Wang, 2011). Only a few studies examined the association between ownership concentration and debt structure (Shyu & Lee, 2009).

In Malaysia, a few studies had examined the existence of ownership concentration (Ishak & Napier, 2004; Malan, Salamudin, & Ahmad, 2012). However, there has been very little research on the relationship between ownership concentration and debt structure in Malaysia. Thus, this paper attempts to fill that gap and to assess the impact of ownership concentration on debt structure of public listed companies (PLC) in Malaysia.

The paper contributes to literature by first, attempting to test ownership concentration using two proxies. The fraction of shares held by the largest shareholders are used as a measure of concentration in ownership structure and five largest shareholders are used as proxy. Second, the study focuses on a unique sample that is 100 Top 100 PLCs in Malaysia based on market capitalisation. These companies make up a big portion of the Malaysian market.

The present study provides policymakers with the trend of ownership concentration and debt structure in Malaysia. Additionally, it allows investors to gain a better understanding of how ownership concentration affect debt structure for effective investment in PLC in Malaysia. Finally, the study enhances creditability of previous researches.

The rest of this study is organised in the following manner: The following section discusses relevant literature and proposes a hypothesis. The third section reports sources of data and description of variables. The fourth section discusses findings while the final section summarises and concludes the paper.

2. Review of Prior Studies

2.1 Ownership Concentration and Debt Structure

Shareholders with concentrated ownership are found to help minimise agency problems (Drieffield, Mahambre, & Pal, 2007) through capital structure decision. Thus, understanding how ownership concentration affects debt structure is important. Brailsford, Oliver, and Pua (2002)

emphasised that shareholders can monitor and control their companies by deciding on their debt structure. Generally, shareholders favour debt financing in the companies to discipline and monitor managers' activities, and thus, ownership concentration is associated with high debt levels. Shleifer and Vishny (1986) stated increase in ownership share is one of the reason shareholders have interests in the company which gives them more influence over the organisation. Large external shareholders reduce instances of shareholder-manager conflicts (Friend & Lang, 1988; Short, Keassey, & Dexbury, 2002). Drieffield, Mahambre and Pal (2007) found ownership concentration positively affects the leverage of family companies in Malaysia, Thailand, and Indonesia. This finding was corroborated by Deesomsak, Paudyal, and Pescetto (2004) and Pindado and La Torre (2011) namely, the existence of a positive relationship between ownership concentration and leverage. This shows the closer the relationship between owners and debtholders, the easier for the former to access borrowing and thus, reduce agency costs. On the other hand, many scholars agree shareholders prefer debt rather than equity financing to retain their control in the firm and avoid ownership dilution (Zhang, 2013; Drieffield, Mahambre, & Pal, 2007; Lundstrum, 2009). They explain that controlling shareholders are usually active in monitoring and asserting control over managerial discretion via debt financing.

However, other studies point to a negative link between ownership concentration and leverage on debt level. Short, Keassey and Dexbury (2002) for example found large external shareholdings are negatively related to debt level. This is a result of active engagement of external shareholders in controlling management in debt restructuring. Liu, Tian and Wang (2011) also reported about expropriation issues between both large and minority shareholders. The controlling shareholders will usually work to secure their own best interest to the detriment of minority shareholders (La Porta, Lopes-de-Silanes & Shleifer, 1999; Liu, Tian, & Wang, 2011; Shleifer & Vishny, 1997). Friend & Lang (1988) and Johnson et al. (2000) explained that large shareholders may expropriate minority shareholders in two ways - by transferring resources out of their firms and by supporting non-profit projects for their private benefits. Santos, Moreira, and Vieira (2013) also reported a negative impact of ownership concentration on debt level. In firms with ownership concentration, agency costs are found to be low and thus, managers have limited debt issue because their decisions are influenced by the large shareholders (Shleifer & Vishny, 1986; Zhang, 2013). Wiwattanakantang (1999) showed that ownership concentration would mean control, which in turn minimises managerial opportunistic behaviours in public listed firms in Thailand. Furthermore, Grier and Zychowicz (1994) stated large shareholders with concentrated ownership

used substitute debt in order to control the activities of management, and thus reported a negative effect of ownership concentration on debt level.

In conclusion, the association between concentration ownership and debt structure is still vague. Therefore, the following hypothesis is developed:

Hypothesis 1: *A significant association exists between ownership concentration and the debt structure of public listed companies in Malaysia.*

2.2 Control Variables and Debt Structure

2.2.1 Growth and Debt Structure

Myers (1984) refers to the pecking order hypothesis - in describing financing practice - which drives means of financing. This is due to the asymmetrical information problem related to investors and firm managers. Hall et al. (2004) emphasised that growth is likely to place greater demand on internally generated funds and push firms into borrowing. In other words, higher level of firm growth will lead to increased debt. The following studies indicated a positive relationship between growth opportunities and debt structure in Nigeria (Salawu & Ile-Ife, 2007); Pakistan (Shah & Khan, 2007); and Jordan (Al-Najjar & Taylor, 2008). However, Titman and Wessels (1988) and Qian et al. (2009) found a negative association between growth opportunities and debt structure in US and China, respectively. The empirical evidence regarding the relationship between growth opportunities and debt structure is mixed. Hence, the following hypothesis is proposed:

Hypothesis 2: *There is a significant association between growth opportunities and debt structure of public listed companies in Malaysia.*

2.2.2 Size and Debt Structure

According to Trade-off Theory and Pecking Order Theory, a company's size determines a firm's debt decision. Karadeniz et al. (2009) found that larger firms are better diversified and have a low likelihood of experiencing financial distress. The finding is consistent with that of Deesomsak et al. (2004) and Abor and Biekpe (2009). The result supports the Trade-off theory. In contrast, the Pecking Order theory suggests that firm size correlates negatively with debt due to less asymmetrical information. Rajan and Zingales (1995) and Frank and Goyal (2009) confirmed that larger firms tend to reduce the chances of undervaluation of new equity issue,

thus, it encourages them to resort to reduce debt financing. Hence, the following hypothesis is developed:

Hypothesis 3: *A significant association exists between firm size and debt structure of public listed companies in Malaysia.*

2.2.3 ROA and Debt Structure

Based on the Trade-off theory, there is tax incentive for debt and this implication suggests that firms should use as much as possible debt to finance their needs. In other words, firms with higher profitability will issue debt in order to reduce their tax burden (Hijazi & Tariq, 2006). Morri and Cristanziani (2009) confirmed that firms will choose internal capital sources due to information asymmetries. Therefore, market value of the company is expected to increase due to an improved profitability, based on the Pecking Order theory. Thus, the Trade-off theory supports a positive relationship between profitability and leverage, whereas the Pecking Order Theory indicates the reverse (Myers, 1977). Nevertheless, empirical studies have generally shown a negative relationship between leverage and profitability (Hijazi & Tariq, 2006; Morri & Cristanziani, 2009). the current study predicts a negative relationship between leverage and profitability. The ROA (Returns on Asset) assesses a firm's profitability, hence, the current study uses the value of the ratio of earnings before interest and taxes to total assets. More profitable firms not only have lower cost of bankruptcy and financial distress, but also have efficient management (Cao et al., 2004; Glover &Hambusch, 2014). Hence, the following hypothesis is developed:

Hypothesis 4: *A significant association exists between profitability and the debt structure of public listed companies in Malaysia.*

3. Data and Variables

3.1 Source of Data

The sample of this study was 100 public-listed firms (based on their market value) in Malaysia as at 31 December 2015. After removing financial firms from the sample, 88 public listed companies were selected over the sample period. The data of ownership concentration was extracted from companies' financial reports, and others from the Datastream and Thomson Eikon databases.

3.2 Variables and Model

The dependent variables used in this paper are Long Term Debt (*LTD*) and Total Debt (*TD*) whereby the former is calculated as the ratio of the book value of long term debt to total assets (Hall, Hutchnison, & Michaelas, 2004). Meanwhile, *TD*, which represents the debt level of a company (Diamond &Verrecchia, 1991; Sharpe 1991), was calculated as the ratio of the book value of total debt to total assets (Su and Li, 2013).

The independent variable for this paper was ownership concentration consisting of the largest shareholder (*OC1*) and five largest shareholders (*OC5*). The *OC1* was computed as the percentage of the largest shareholdings while *OC5* was computed as the total percentage of the top five largest shareholdings. The purpose of using these two variables was to examine how the key shareholders affect debt.

Additionally, three control variables, namely firm's growth, profitability and firm's size were also included. Firm growth (*GROWTH*) is calculated as changes in assets as compared to the prior year (McConnell & Servaes, 1995). Firm size (*SIZE*) is one of the variables because many researchers believe it can affect the link between ownership concentration and debt (Su and Li, 2013). It is calculated as the logarithm of total sales. Larger firms are expected to have more debts. Profitability (*ROA*) is an indicator used to measure the firm's profitability, and it is calculated as net income divided by total assets (Shyu & Lee, 2009; Amato and Burson, 2007). According to Barber and Lyon (1997), operating income is obscured by tax consideration, interest payment and minority interest, so that net income is a cleaner measures than earnings of the productivity of operating assets. Putting them together, we derive:

$$Debt_{i,t} = \beta_0 + \beta_1 OC_{i,t} + \beta_2 GROWTH_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t} \quad (1)$$

where i = company, t = year, β_0 = constant term, and ε = residuals

4. Empirical Findings

4.1 Descriptive Statistics

Table 1 shows the descriptive statistics of the aforementioned variables. The *LTD* (long term debt) accounts for an average value of 17.71%, suggesting that the sample companies have a low level of long term debt (Su & Li, 2013). In other words, their financing was via short-term debt. Total debt (*TD*) amounted to 31.01%, with a maximum value of 32.54%. The mean value is higher compared with that of Suto (2003), who found the total debt of Malaysian firms (for data from 1995 to 1999) was 29.66%

and Drieffield, Mahambre, and Pal (2007) at 26% mean value of debt for Malaysian firms (for data 1994 to 1998). Average concentrated ownership of largest shareholder (*OC1*) was 41.50%, while average concentrated ownership of five largest shareholders (*OC5*) was 54.90%. The average *GROWTH* had a mean of 13.08% while *SIZE* had a mean value of about 2.76. The mean profitability (*ROA*) indicated a low profitability (Su & Li, 2013).

Table 1: Descriptive Statistics

	Mean	**Maximum**	**Minimum**	**Std. Dev.**
LTD	0.1771	7.3597	0	0.3715
TD	0.3101	32.544	0	1.5495
OC1	0.4150	38.3700	0	1.8279
OC5	0.5449	0.8770	0	0.2314
GROWTH	0.1308	0.5740	-37.7062	1.8127
SIZE	2.7622	4.5738	-1.9586	1.1535
ROA	0.0829	0.7306	-0.1461	0.0905

4.2 Multivariate Regression Analysis

Table 2 contains the findings of panel data regression analyses. First, pooled ordinary least squares (OLS) regression using LTD as a dependent variable was conducted. Even though polled OLS regression cannot adjust for firm-specific or time-specific effects, Model 1 is still used to showpooled OLS for robust check. The findings indicate that concentrated ownership of the largest shareholders (OC1) and the five largest shareholders (OC5) are both negatively associated with LTD at 1% significance level. The results show a R^2 of 8.07% and 8.08% respectively, consistent with Su and Li (2013) and Billett and Mauer (2003), and an F-statistic of 9.4926 and 9.5241 respectively which is significant at 1% level.

To ensure the study uses the most appropriate model, Breusch and Pagan (1980) Lagrange Multiplier (LM) test was conducted for cross-sectional dependence. Based on the result of LM test below, the LM statistic ($P < 0.05$) suggested that panel data regression outperformed pooled OLS regression. Next, a Hausman test (Greene, 2003; Wooldridge, 2010) was conducted to decide whether to employ a fixed effect model (FEM) or a random effect model (REM) in the regression analysis. Based on the Hausman test statistics below, a p-value of less than 0.05 suggests the use of a fixed effect specification. Thus, this study employed FEM. With these models, the differences across firms were dealt with by allowing firm-varying intercepts when estimating regression models.

From the *OC1* perspective, the empirical evidences of Model 1 depicted a significantly negative relationship between concentrated ownership of the largest shareholder (*OC1*) and debt structure at the 1% level. Consistently,

when *OC1* was replaced with *OC5*, the finding also indicated that concentrated ownership of the five largest shareholders (OC5) was significantly and negatively associated with *LTD* at 1% significance level. The result was consistent with those of Billet and Mauer (2003), Lean, Ting and Kweh (2015) and Lo et al. (2016). Concentrated ownership of the five largest shareholders was also negatively associated with LTD at the 1% significance level. These results supported Hypothesis 1 that a significant association exists between ownership concentration and debt structure. Specifically, the greater the ownership concentration is, the lower the long-term debt would be. Put differently, a higher level of monitoring may mean a lower level of debt.

Table 2: Multivariate Regression Analysis for LTD

	OLS		**Fixed Effect**	
Variable	**Coefficient (t-Statistic)**	**Coefficient (t-Statistic)**	**Coefficient (t-Statistic)**	**Coefficient (t-Statistic)**
C	0.0289	0.0284	0.0330	0.0327
	(0.4891)	(0.4829)	(0.5480)	(0.5450)
OC1	-0.2585***		-0.2602***	
	(-3.3482)		(-3.3479)	
OC5		-0.2576***		-0.2596***
		(-3.3627)		(-3.3641)
GROWTH	-0.2622***	-0.0036	-0.2642***	-0.0040
	(-3.3744)	(-0.3887)	(-3.3800)	(-0.4216)
SIZE	0.0865***	0.0865***	0.0858***	0.0858***
	(5.4974)	(5.5033)	(5.3982)	(5.4063)
ROA	0.6106***	0.6113***	0.5955***	0.5959***
	(3.1160)	(3.1246)	(3.0260)	(3.0325)
Hausman Test			P < 0.05	
F-statistic	9.4926***	9.5241***	5.1186***	5.1362***
DW	1.9285	1.9246	1.9242	1.9204
Adj R-sq	0.0807	0.0808	0.0873	0.0874

Note: *, **, and *** denote the significance levels at 10%, 5% and 1% respectively. Fixed effects include year and industry dummies.

Du & Dai (2005) explained the larger the ownership concentration is, the higher the likelihood of the former to overwhelm the minority investors, aggravating agency problems to result in higher cost of debt financing. Short term debt could limit the opportunism behaviour in companies compared with long term debt. In order to constrain the ultimate controlling shareholders, banks thus, have greater tendency to supply short-term funds, so that risks can be reduced, especially for the firms with large ownership

concentration, be it the five largest shareholders and or the largest shareholder.

This study had performed a robustness check by replacing LTD with TD (see results in Table 3). The same results hold when we replace *LTD* with *TD*. They reconfirm that low levels of debt structure are likely observed in firms with a high percentage of concentrated ownership. In summary, our results are robust to the alternative measures of the debt ratio and alternative methods of running the data.

Table 3: Robust test: Multivariate Regression Analysis for TD

	OLS		Fixed Effect	
Variable	**Coefficient (t-Statistic)**	**Coefficient (t-Statistic)**	**Coefficient (t-Statistic)**	**Coefficient (t-Statistic)**
C	0.2161	0.2115	0.2419	0.2388
	(0.8597)	(0.8455)	(0.5480)	(0.9362)
OC1	-0.9396***		-0.9525***	
	(-2.8636)		(-2.8861)	
OC5		-0.9311***		-0.9465***
		(-2.8602)		(-2.8879)
GROWTH	-0.9484***	-0.0087	-0.9628***	-0.0102
	(-2.8722)	(-0.218)	(-2.9007)	(-0.2554)
SIZE	0.1246*	0.1241*	0.1202*	0.1198*
	(1.8622)	(1.8579)	(1.7806)	(1.7772)
ROA	3.1614***	3.1674***	3.0819***	3.0858***
	(3.7965)	(3.8098)	(3.6884)	(3.6986)
Hausman Test			P < 0.05	
F-statistic	5.2806***	5.2801***	3.1065***	3.1101***
DW	2.0071	2.0025	2.0040	1.9996
Adj R-sq	0.0466	0.0465	0.0548	0.0548

Note: *, **, and *** denote the significance levels at 10%, 5% and 1% respectively. Fixed effects include year and industry dummies.

In summary, active engagement of large shareholders in controlling management to improve the role of debt may mean expropriation issue between large and minority shareholders (Short, Keassey and Dexbury, 2002; Liu, Tian and Wang, 2011) because the former care more about their own interest (La Porta, Lopes-de-Silanes and Shleifer, 1999; Liu, Tian and Wang, 2011; Shleifer and Vishny, 1997).

5. Conclusion

This study has investigated the association between ownership concentration and debt structure in Malaysia by examining a sample of 88 companies from top 100 Malaysia public listed companies between 2011

and 2015. The empirical results showed that ownership concentration with largest shareholding had a negatively relationship with debt structure. Specifically, concentrated ownership with five largest shareholders was negatively associated with debt structure, Overall, the results of this study point to a significantly negative link between ownership concentration and debt structure among public listed companies in Malaysia.

The findings pose an interesting question. Large shareholders are likely to influence the debt structure of a company, suggesting they are a player in the decision-making process of the firm. Future research can examine the potential conflict between shareholders and managers, as well as potential issues between large and minority shareholders. Funders may have to consider twice before lending money to companies with ownership concentration because of potential expropriation issue and also lower transparency.

The generalisability of these findings is liable to specific restrictions. Future research may focus on the different roles of shareholders as well as include more variables to establish a stronger link between ownership concentrations and debt structure. Additionally, ownership concentration may be divided into largest and smallest shareholders and include short term debts as well.

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