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The Influence of Ultimate Ownership Concentration on Leverage

(Pengaruh Pemusatan Pemilikan Utama terhadap Leveraj Firma)

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ABSTRACT

This paper investigates the relationship between ultimate ownership concentration and the extent of leverage in the context of Malaysia. The data of this study include 478 publicly listed firms from2001 to 2012. The results show that ultimate ownership concentration has U-shaped relationship with leverage, with the turning point being at the ownership concentration of 42%. Based on signalling theory, the results show that a moderate extent of ultimate ownership concentration tends to adopt lower leverage for they have higher incentives to self-monitor managerial opportunistic decision making; by contrast, an ultimate owner who holds excessively high concentration of shareholdings shows self-benefitting behaviour, with the owner tending to adopt higher leverage to sustain the loss of firm value from expropriation. However, higher institutional ownership concentration plays a significant monitoring role over the owner's opportunistic behaviour through the signalling of lower leverage even when the shareholding of ultimate owner is excessively large.

Keywords: Ultimate ownership; leverage; nonlinear; institution ownership; Malaysia

ABSTRAK

Kajian ini mengkaji hubungan antara pemusatan pemilikan utama and leveraj firma dalam Malaysia konteks. Kajian ini menggunakan data daripada 478 buah syarikat tersenarai dari tahun 2001 hingga 2012. Keputusan kajian ini memaparkan hubungan tersebut adalah bercorak-U, dengan titik perubahan berada pada tahap 42 peratus pemilikan utama. Mengikut teori signal, keputusan tersebut menggambarkan bahawa pemusatan pemilikan utama yang sederhana cenderung untuk menggunakan leveraj yang rendah, kerana pemilik menggunakan peranan leveraj untuk mengawasi kesempatan pengurus dalam membuat keputusan bagi kepentingan sendiri; sebaliknya, pemilik utama yang mempunyai pemusatan pemilikan yang tinggi cenderung untuk menyalahgunakan sumber firma untuk kepentingan sendiri, dengan itu, mereka suka akan leveraj yang tinggi untuk mengekalkan nilai firma. Walau bagaimanapun, pemusatan pemilikan institusi yang tinggi memainkan peranan yang penting untuk mengawasi tingkah laku pemilik yang bersifat oportunistik, di mana leveraj yang rendah telah digunakan walaupun pemusatan pemilikan utama adalah tinggi.

Kata kunci: Pemilikan utama; leveraj; nonlinear; pemilikan institusi; Malaysia

INTRODUCTION

One of the key features of the corporate ownership structure in Malaysia is that owners have a high ownership concentration, enabling them to fully control the important decisions made for the firms. Malaysia is ranked among the highest in terms of ownership concentration in East Asian countries, with the top five shareholders owning 58.8% of outstanding shares in the year 1998 (Capulong et al. 2000: 22) and 62% of outstanding shares over the period 1996-2000 (Haniffa & Hudaib 2006). The latest study by Yunos et al. (2010) documents that 96.76% of Malaysian firms have a high ownership concentration. In this environment of high ownership concentration, the majority of the publicly listed firms are controlled by dominant shareholders or the ultimate owners (Claessens et al. 2000; Song et al. 2006-2007, Winter 2006-2007). In Malaysia, the majority of owners control their firms through indirect shareholdings by a chain of firms that are privatelyheld (Song 2007). This situation indicates that only accessing the direct shareholdings cannot reveal the true shareholdings of owners,given that the significance of indirect shareholdings far exceeds that of direct shareholdings due to the preferences of the majority of owners to keep their actual ownership less clear through indirect shareholdings, as suggested by Capulong et al. (2000) and The World Bank (2005). Accordingly, this study manually identifies the ultimate owners of firms by taking into account the aggregation of direct and indirect shareholdingsof the owner in a firm, i.e., the ultimate ownership.

Although a high ownership concentration can reduce problems of asymmetry by increasing the alignment of interests between managers and shareholders, as proposed by Jensen and Meckling (1976), it can lead to a host of other agency problems or moral hazard behaviours in the form of risk shifting, empire building, perquisite consumption and entrenchment at the expense of minority shareholders and the wealth of other stakeholders (Megginson1997). Understanding how the ultimate owners utilize the power

of shareholdings to make important decisions for firms is critical. Therefore, it is vital to access whether the ultimate owners who have dominant voting rights in firms behave in a manner in which their interests are aligned with those of other shareholders by maximizing firm value, or on the contrary, they expropriate firm value at the expense of the other minority shareholders. Investigating the direct relationship between ultimate ownership concentration and firm value may be less informative in accessing the opportunistic behaviour of ultimate owners because there are a number of alternatives to sustain the decreasein firm value due to expropriation. In other words, expropriation may occur without indicating the decrease in firm value.

Accordingly, this study attempts to examine how the ultimate ownership concentration affects decision making concerning leverage from the agency perspective of signalling theory. When leverage is not efficiently managed, decision making concerning leverage is vital in affecting the firm's opportunity for future growth. The inefficient use of leverage will increase default risks and is always viewed unfavourably by investors. Mehran (1992) stresses that capital structure models that ignore agency costs or agency problems are incomplete, and Pandey (2004) suggests a research gap concerning the conflicts of interest between shareholders and managers and between shareholders and debtholders on debt policy among Malaysian firms. The literature search in this study does not find any papers that access ultimate ownership concentration via direct and indirect shareholdings in the study of capital structure. This gap represents value added in the present study, which makes the strong argument that ultimate ownership concentration better reflects the true power of owners in decision making. The ultimate owner is expected to be the person who has vital influence on decision-making processes. The use of direct shareholdings, as shown in previous studies,may not comprehensively reflect the actual shareholding structure in Malaysia because majority of firms are controlled through indirect shareholdings by a chain of firms that are privately held (Song 2007).

In addition to investigating the relationship between ultimate ownership concentration and leverage, this study further examines whether there is a nonlinear relationship between ultimate ownership concentration and leverage. The findings are able to determine whether the decision on the capital structure is sensitive to the extent of the ownership concentration among Malaysian firms. Through signalling theory, the findings are able to imply how the concentration of the ultimate owners' shareholdings can influence the extent of leverage from the agency perspective. To ascertain the existence of agency issues in the relationship between ownership concentration and leverage, this study further investigates whether the presence of high institutional shareholdings is able to more closely monitor the decision of the ultimate owner concerning capital structure. This study is able to show the existence of opportunistic behaviour on the part of the ultimate owners when high institutional share holdings are able to reduce leverage to signal better corporate governance evenwith the presence of a high ultimate ownership concentration. The ultimate findings of this study canprovide a solid reference to scholars and policy makers concerning the influence of the ultimate ownership concentration on the capital structure.

LITERATURE REVIEW

Agency problems arise as a result of the separation of ownership and control (Berle & Means 1932). Barnea, Haugen and Senbet (1985) view agency theory in finance as the application of the economic theory of agency to contractual relations in finance. Jensen and Meckling (1976) associate capital structure theory with behavioural aspects of the principal-agent relationship. Theirs is a second landmark paper in capital structure theory, altering the direction of the theory. The agency problems that Jensen and Meckling propound are moral hazard agency problems. Jensen and Meckling (1976) argue that the value of the firm is not fixed, as Modigliani and Miller (1958) assume, but instead depends on the actions of management, especially the consumption of "non-pecuniary benefits" (perks). Examples of perks are fancy offices, private jets and the easy life. Perks are attractive to management but are of no interest to shareholders because they reduce firm value (Hart 2001). Therefore, Mehran (1992: 540)documents that capital structure theories that ignore agency theory may be "seriously incomplete". Unlike other capital structure models that assume that managers always act in the best interests of shareholders, agency theory is concerned with situations in which managers pursue their self-serving interests at the expense of the value-maximizing activities of the firm (Jensen & Meckling 1976). The majority of the studies in the literature, such as those bySun et al. (2015), Florackis and Ozkan (2009), Datta et al. (2005), Brailsford et al. (2002) and Zwiebel (1996), illuminate the relationship between managerial ownership and leverage. These studies propose that a high debt ratio is able to discipline managers to prevent them from self-interested decision making. In summary, debt is viewed as a disciplinary mechanism that alleviates agency problems by constraining managers or controlling shareholders' over investment behaviour (Grossman & Hart 1982; Jensen 1986).

Capital structure research is closely associated with signalling theory. Signalling theorists suggest that shareholders and lenders have significant asymmetric information regarding an investment prospect. To convey a positive signal to lenders regarding the strength of firms to payback the debt, firms attempt to adopt high leverage or rich accumulated assets. Lenders will typically evaluate the signal prior to issuing a loan to the firm. Empirical studies such as that by Ravid and Sarig (1991) consistently show that firms with better performance are highly leveraged and pay higher dividends to investors whereas firms with lower performance have lower leverage. It is

claimed that adopting high leverage implies the strength of firms with regard to opportunities for future growth. Regarding corporate governance, signalling theory predicts that high-quality corporate governance diminishes the role of leverage in mitigating moral hazards. In other words, good corporate governance plays an active role in monitoring managers' decision making concerning the capital structure to prevent opportunistic behaviour. Thus, firms tend to adopt lower leverage to the reduce cost of financing if their strength is assured by having a good corporate governance system. In this case, a negative relationship between ownership concentration and leverage is expected, in accordance with signalling theory.

According to the early study by Shleifer and Vishny (1986) and the recent study by Iliev et al. (2015), large shareholders are interested inusing their voting power to keep the quality of corporate governance in check. The incentive to monitor the management team is increased, especially to increase the ownership of blockholders (Mehran 1992). Large shareholders with concentrated ownership have sufficient rights to interrupt the decisions of managers. Shleifer and Vishny (1997) document that large shareholders may replace poor performing managers and cut discretionary spending, such as advertisement and entertainment expenditures. Given that a high ownership concentration guarantees active monitoring, managerial opportunism is less likely to occur. Therefore, debt becomes a less reliable signal to outsiders ofa firm's status with regard to good corporate governance. The presence of shareholders with concentrated ownership serves as a signal of firms, guaranteeing optimal firm performance (Zeckhauser & Pound 1990). This interpretation based on signalling theoryexplains the negative relationship between the level of debt and the degree of ownership.

H_1 There is a negative relationship between ultimate ownership concentration and leverage

In the literature, few studies raise Type II agency issues in the study of the capital structure, and the majority of the research on the capital structure focuses on Type I agency issues. Nonetheless, there is no implication that the Type II agency issues in decision making concerning the capital structure are insignificant; Jiraporn and Gleason (2007) have provided empirical evidence to show that shareholders' power affects the capital structure. As documented by Claessens et al. (2002), the larger the control-ownership wedge of a controlling owner is, the higher the incentives of the owner to divert corporate resources for private benefits at the expense of minority shareholders. The study suggests that the issue of controlling shareholders' expropriation of value from minority shareholders is the dominant agency problem in most countries. In the context of Malaysia, the majority of publicly listed firms are controlled by a small group of related parties and managed by owner-managers (The World Bank 2005). There arefewer conflicts of interest between managers and shareholders compared to Western firms, but there are significant conflicts of interest between the majority shareholders or internal managers and minority shareholders, which is a so-called Type II agencyissue.

Hope, Langli and Thomas (2012) suggest that a controlling owner can increase agency costs through extracting the private benefits of control from the firm. The implication is that Type II agency issue can be significant when the controlling shareholders have full control over the decisions of the firm. This phenomenon can be shown by Céspedes, González and Molina (2010), who find an inverse U-shaped relationship between ownership concentration and leverage. Their findings imply that there is a threshold for the contradicting influence of ownership concentration on leverage. Their study shows that shareholders with a less concentrated ownership have lower incentives to monitor the management and that adopting higher leverage is an alternative to replace the monitoring role of shareholders; when the ownership concentration exceeds a threshold, shareholders have greater control over the management's decision making, and in this case, leverage is less essential from the perspective of corporate governance. The inverse U-shaped relationship is consistently shown by Bruslerie and Latrous (2012).

H_2 There is a nonlinear relationship between ultimate ownership concentration and leverage.

Shleifer and Vishny (1986) document that the presence of external blockholders can minimize the conflict of interest between shareholders and managers. The rationale is thata high ownership concentration increases the incentive to monitor managerial opportunism. A concentrated ownership leads to active monitoring over manager's self-interested decision making concerning the capital structure. With their large shareholdings, institutional shareholders thus have stronger incentives and better skills in monitoring the role played (Grossman & Hart 1982). Previous studies such as those by McConnell and Servaes (1990), Del Guercio and Hawkins (1999), Nesbitt (1994), Smith (1996), Lundstrum (2009) and Sun et al. (2015) have found evidence that is consistent with the monitoring role played by institutional investors that can apply pressure to reduce opportunistic or self-serving behaviour. Institutional shareholders are able to exert their rights to influence corporate decisions (Maug 1998). Institutional investors that have adequate voting power to influence corporate decisions may pressure managers to make dividend payments, which will lead to the need for future debt financing (La Porta et al. 2000). Sun et al. (2015) find that institutional ownership is positively related to firm leverage levels. They show that the presence of institutional shareholders encourages firms to choose debt as a governance mechanism to constrain managerial entrenchment, which is consistent with Ben-Nasr, Boubaker and Rouatbi (2015), who find that the presence of multiple large shareholders is associated with shorter debt maturity. These findings indicate that entrenched

controlling owners prefer longer debt maturity to avoid frequent monitoring by the debt market, which suggests that the institutional ownership concentration may moderate the relationship between ultimate ownership concentration and leverage.

H_3 The negative relationship between ownership concentration and leverage is moderated by a higher degree of institutional investors.

METHODOLOGY

The sample for this study is based on firm-level data from Malaysian firms listed on the main board (currently known as the Main Market) of Bursa Malaysia from 2001 to 2012. Our sample period begins with the year 2001 because it is the starting point for firms' recovery from the negative impact of the 1997 Asian Financial Crisis that struck the Malaysian market. Most Malaysian listed companies undertook several years of comprehensive restructuring after the crisis, and the process was ended officially in the year 2001 (Bany-Ariffin et al. 2010). Financial firms were dropped because they have different income measuring rules that govern these firms compared to firms from other sectors (Short & Keasey 1999). Cross-sectional time series data are applied in this analysis. The time span of the data coverage is 12 years, extending from 2001 to 2012. A total of 478 firms are selected over 813 firms, covering approximately 60% of the population. The selection is based on data availability for ultimate ownership concentration. The other fundamental variables of the firms are obtained from Datastream, a division of Thomson Reuters. Institutional ownership data are purchased from Bursa Malaysia. There are a total of 5736 firm-year observations in the analysis. Because there are some missing data at certain years for some firms, we are left with unbalanced panel data.

The data for the ultimate ownership information is manually collected from the annual reports of individual firms. Specifically, ultimate ownership is initially traced through the list of substantial shareholders in the annual report to identify the immediate largest shareholder. If the immediate largest shareholder belongs to a listed firm, then the trace in the annual report of that firm is continued to identify the next immediate largest shareholder. This process continues until we find the ultimate owner of the sample firms. If the firm is owned by a privately held firm, then the ultimate ownership is identified through the disclosure information as notes below the list of substantial shareholders. These notes are given to provide a more detailed explanation of how and from whence the indirect shareholdings of a substantial shareholder were derived. Data on firms' political connections are manually collected through annual reports and other sources of information available online. The data on institutional ownership is obtained from Bursa Malaysia, an exchange holding company of the Malaysian stock market.

To estimate the relationship between ultimate ownership concentration and leverage, model (1) is developed, modifying the leverage model by Wiwattanakantang (1999). The dependent variable is leverage, which is measured asthe ratio of total debts to total assets of firm *i* in year *t*. The control variables are firm size ($FirmSize_{it}$), measured as the natural logarithm of the total assets of firm *i* at year *t*, growth opportunity ($Growth_{it}$), which is measured as the market-to-book value of firm *i* at year *t*, profitability ($Profitability_{it}$), which is measured as the return on assets of firm *i* at year *t*, asset tangibility ($Tangible_{it}$), which is measured as the ratio of net tangible assets to total assets of firm *i* at year *t*,and firm dividend payout ($Dividend_{it}$), which is measured as the dividend paid per share. The concentration of ultimate ownership ($UltimateOwnership_{it}$) is the ratio of the number of shares owned by the ultimate owners to the total outstanding shares of firm *i* in year *t*.

To fit the corporate governance environment in the context of Malaysia, this study takes into account the influence of politics on the firms' leverage by incorporating a dummy variable for the political connections of firms. The reason is Johnson and Mitton (2003) document a significant relationship between politically connected firms and leverage in Malaysia. According to Johnson and Mitton (2003), politically connected firms are defined as firms with a close relationship with key government officials, and this information relies on Gomez and Jomo's (1997) identification of politically connected firms in Malaysia. Both of these studies find that, in Malaysia, politically connected firms have significantly higher (on average, 11%) leverage than non-politically connected firms prior to the Asian financial crisis in July 1997. Therefore, a positive relationship between the political connections of firms and leverage is expected. Hence, the dummy variable of $D\_Politics_{it}$ is incorporated into the regression. The variable takes the value of one for firms that have political connections. A political connection is defined as a family member of the owner who is a leading politician and who sits on the board; an owner who has a close relationship with a politician; or a previous or current government servant who sits on the board of the firm. This information is obtained from Johnson and Mitton (2003) andthe annual reports.

$$Leverage_{it} = \alpha_0 + \beta_1 FirmSize_{it} + \beta_2 Growth_{it} + \beta_3 Profit_{it} + \beta_4 Tangible_{it} + \beta_5 DivPay_{it} + \beta_6 D\_Politics_{it} + \beta_7 UltimateOwnership_{it} + \varepsilon_{it} \quad (1)$$

The majority of capital structure studies in Malaysia have confined their research to firm size (Tho 1993; Mohamad 1995; Mat Nor &Yatim 2000; Tay 2001; Ahmad-Zaluki et al. 2002). Previous studies show that firm size is an important determinant of leverage. The larger the firm size is, the greater the accessibility to external debt financing. Hence, a positive relationship between firm size and leverage is expected.The firms' growth opportunity, measured by the market-to-book value, is also

a major determinant of leverage. It captures the changes in leverage resulting from equity mispricing. In accordance with asymmetric information theory, overvaluation leads to equity issuing, whereas undervaluation leads to debt issuing. Firms with higher market-to-book values should have lower leverage via equity issuance. However, firms with high growth opportunities have better access to external debt financing. Accordingly, a positive relationship between growth opportunity and leverage is expected.

Additionally, firms with higher profitability have lower costs in bankruptcy and financial distress. With the use of debt as a monitoring device, the free cash flow problem is able to be minimized (Jensen 1986). Thus, profitable firms use more debt financing. A positive relationship is expected to obtain. The asset structure or tangibility of assets is another capital structure determinant that has attracted interest among local researchers such as Tho (1994), Pandey (2001), Ahmad-Zaluki et al. (2002) and Kester and Isa (1994). Firms with more tangible assets are better able to secure debt, given that these assets can be used as collateral (Jensen & Meckling 1976). Indeed, tangible assets are worth more than intangible assets; therefore, they are of greater interest to bondholders, who generally demand a lower risk premium. Hence, a positive relationship between tangible assets and leverage is expected. Dividend payout is also found to be negatively related to leverage (Tho1994).

In this study, panel data analysis was used due to its merits with regard to cross-sectional and time-series analyses. According to Davidson and MacKinnon (2004), one of the advantages of panel data analysis over ordinary least squares regression is that panel data analysis is able to explicitly handle the heterogeneity of cross-sectional data by allowing for individual-specific effects. Panel data analysis also increases the number of data points, increases the degrees of freedomand reduces multicollinearity problem, which leads to more efficient estimates (Hsiao 1986). In addition, Baltagi (2001) suggests that panel data analysis can control for the individual heterogeneity that is captured by firm-specific fixed effects or random effects components.

RESULTS AND DISCUSSION

Table 1 presents the descriptive statistics of the variables used in this study. On average, firm adopt leverage of 22%, with approximately 25% of the firms having leverage lower than 10%. A total of 75% of the firms have adopted leverage lower than 33%. On average, firms have 1.50 million Ringgit Malaysia of total assets, with the lowest being total 0.01 million and the largest 88 million Ringgit Malaysia. Market-to-book, a proxy for firms' growth opportunities, has positive mean value of 1.07, with a maximum value of 12.28. Firms' return on assets (ROA) is 4%onaverage, with a maximum ROA of 36%. There are a few firms have a negative ROA, demonstrating that these firms face losses in some years. The mean of the ratio of tangible assets to total assets is 0.58, with a minimum value of -0.25. The negative ratio value indicates that, for some firms, goodwill exceeds tangible assets. The mean value of ultimate ownership is 43%, and 75% of the sample has more than 50% ownership. This finding indicates that the majority of Malaysian firms have a high ownership concentration.

Table 2 presents the correlations between the dependent variable and independent variables, and the results ofthe variance inflation factor (VIF) for the multicollinearity testarereported in the table. It is noted that the ratio oftangible assets to total assets has a large negative coefficient of correlation with leverage, i.e., -0.7580. Dividend payout and ultimate ownership concentration also show negative correlations with leverage. Instead, firm size, market-to-book, ROA and political firms show positive correlations with leverage. The table shows thatnone of the independent variables ishighly correlated with each other and that the VIF values of each variable are low, which indicatesa lack of multicollinearity issues in the regression models.

TABLE 1. Descriptive statistics

				Quantiles				
	Obs	Mean	S.D.	Min	0.25	Median	0.75	Max
Leverage	5640	0.22	0.20	0.00	0.06	0.20	0.33	4.63
Total Assets (million)	5640	1.50	5.20	0.01	0.15	0.33	0.86	88.00
Market-to-Book	5680	1.07	1.27	-0.96	0.49	0.77	1.20	12.28
Tangible Assets/Total Assets	5640	0.58	0.23	-0.25	0.43	0.59	0.75	1.13
Dividend Payout	5142	0.23	0.25	0.00	0.00	0.18	0.38	1.00
Returns on Assets	5536	0.04	0.08	-0.33	0.01	0.04	0.08	0.36
D_Politics	4683	0.61	0.49	0.00	0.00	1.00	1.00	1.00
Ultimate Ownership	5555	0.43	0.17	0.09	0.30	0.43	0.55	0.88
Institutional Ownership	5650	0.30	0.23	0.00	0.09	0.26	0.50	0.83

TABLE 2. Correlations

		1	2	3	4	5	6	7	8	9	VIF
1	Leverage	1.000									
2	FirmSize	0.1754	1.000								1.40
3	Growth	0.0025	0.1446	1.000							1.21
4	Tangible	-0.7580	-0.2237	-0.0995	1.000						1.32
5	Dividend	-0.2443	0.2314	0.2838	0.2609	1.000					1.35
6	Profitability	0.1864	-0.1870	-0.2943	-0.2059	-0.3093	1.000				1.25
7	D_Politics	0.0634	0.1996	-0.0015	-0.0682	-0.023	-0.0451	1.000			1.06
8	UltimateOwnership	-0.0937	0.3364	0.1099	0.1052	0.2505	-0.1740	-0.0157	1.000		1.35
9	InstitutionalOwnership	-0.0598	0.0685	0.0915	0.1660	0.1979	-0.1618	0.0165	0.3665	1.000	1.20

Table 3 presents the baseline results concerning the relationship between the control variables and leverage, using pooled ordinary least squares, random effect and firm fixed effect specifications. Overall, the results using pooled OLS, random effect and firm fixed effect models are nearly consistent. To choose the best regression model, we first run Breusch and Pagan Lagrangian multiplier test to compare between random effect model and pooled OLS model; failing to reject null hypothesis of the test conclude that random effect is appropriate compared to pooled OLS. Then, we perform Hausman test to determine whether random effect or firm fixed effect is appropriate; the result show that fixed effect is appropriate. We choose to use fixed effect specification in the following regressions.

Firm size is shown to have positive relationship with leverage, and the effect is significant at the 1% level. This finding supports the view that larger firms have better access to external debt financing. The ratio of tangible assets to total assets showsa negative relationship with leverage, and its effect is significant at the 1% level. For every one-unit increase intangible assets to total assets, leverage decreases by about 0.23 units. The negative relationship can be explained by the asset substitution hypothesis, in which large tangible assets induce shareholders to invest in higher-risk projects for greater returns, which increasesthe default risks faced by debtholders. Accordingly, firms with high tangibility may face difficulty in searching for debt financing, especially in a developing country such as Malaysia wherethe investor protection legal system is weaker. Similarly, a negative relationship between tangible assets and leverage is found in Prime and Qi (2013), who use Chinese manufacturing firms in their analysis.

TABLE 3. Baseline results

	Pooled OLS	Random Effect	Firm Fixed Effect
Firm Size	0.0247***	0.0265***	0.0323***
	(0.0000)	(0.0000)	(0.0000)
Market-to-Book	0.0037***	0.0018	0.002
	(0.0039)	(0.1947)	(0.1732)
Tangible	-0.2227***	-0.2351***	-0.2363***
	(0.0000)	(0.0000)	(0.0000)
Dividend	-0.0298***	-0.0093	-0.0035
	(0.0000)	(0.1650)	(0.6247)
ROA	-0.0267	-0.0278**	-0.0298**
	(0.1124)	(0.0433)	(0.0342)
D_Politics	0.0097***	0.0085**	0.0079
	(0.0013)	(0.0427)	(0.1186)
Constant	-0.1023***	-0.1208***	-0.1950***
	(0.0000)	(0.0000)	(0.0000)
Observations	4244	4244	4244
R^2	0.3563	0.3552	0.6555
F-Stat	392.44***	1312.67***	163.61***

Note: ***, ** and * represent 1%, 5% and 10% level of significance

Breusch and Pagan Lagrangian multiplier test for random effects is performed; the result fails to reject the null hypothesis and conclude that random effect is appropriate rather than OLS. Hausman test is further performed; the result shows chi-square of Hausman test 13.48, with p-value of 0.036, which implies to use fixed effects.

Return on assets (ROA) shows a significant positive relationship with leverage in random and fixed effect models. The result is consistent with previous studies that show that profitable firms have lower costsin bankruptcy and have greater access to debt financing. Market-to-book and dividend payout do not show a significant impact on leverage in random and fixed effect models. The insignificant relationship of dividend payout may imply that it is not significantly true that wealth transfers through dividend payments to shareholders at the expense of debtholders' value. This study may contribute to the limited literature on wealth transfer by showing dividend pay out is not a significant wealth transfer path from the perspective of debtholders. The issue of political connections shows a significant positive relationship with leverage, which is expected from the literature review; however, the significant relationship disappears in the fixed effect specification, whereas the positive sign of the coefficient remains.

Table 4 shows the relationship between ultimate ownership concentration and leverage. It is found that ultimate ownership does not have a significant influence on leverage. When incorporating the square of the ultimate ownership concentration in the regression, it is found thatthere is a significant nonlinear relationship between ultimate ownership concentration and leverage. The signs of the coefficients of ultimate ownership with and without the square are the opposite, andthe square of the ultimate ownership concentration has a significant positive relationship with leverage, whereas the ultimate ownership concentration without the square has a significant negative relationship with leverage. The U-shaped nonlinearity contradicts the previous studies that obtain an inverse U-shaped nonlinearity. Nonetheless, the result obtained in this study is economically significant,which could be explained by the manner in which theexcessively high concentration of voting power in the hands of the ultimate owner has increased incentives to expropriate firm value for self-benefit. In this case, the owner tends to increase leverage to prevent firm value from declining due to expropriation. The U-shaped relationship obtained in this study, which is different from that obtained in previous studies, may be due to the emphasis on ultimate ownership concentration in this study instead of an exclusive focus on direct ownership without considering the pyramidal structure of ownership. This study claims that only by considering the ultimate ownershipis it possible to access the true power of the firm's owner in influencing the important decisions made in the firms such as the decision concerning leverage.

The overall results of Table 4 imply that, prior to exceeding a threshold value, every increase in ultimate ownership leads to a decrease in leverage. The opposite occurs when the ultimate ownership concentration exceeds the threshold. This study provides the threshold value for this case, i.e., 0.4224 or 42% of ownership concentration, using a pre-set Stata program coding.This finding leads to the notion that, in accordance with signalling theory, when controlling is less significant, i.e., below 42%of ownership, the owner tends to align herinterests with those of other shareholders to monitor opportunistic activities in the firmand replace the use of leverage in monitoring to reduce the cost of financing. However, when the owner has almost full control over decision making, she has a higher incentive to expropriate firm value for self-benefit rather than to share interests with the other shareholders.

TABLE 4. Regression results on ultimate ownership and leverage

	UO	UO^2
Firm Size	0.0325***	0.0318***
	(0.0000)	(0.0000)
Market-to-Book	0.0010	0.0010
	(0.5347)	(0.4974)
Tangible	-0.2395***	-0.2400***
	(0.0000)	(0.0000)
Dividend	-0.0019	-0.0013
	(0.7881)	(0.8547)
ROA	0.0298**	0.0294**
	-(0.0348)	-(0.0367)
D_Politics	0.0081	0.0077
	(0.1093)	(0.1291)
Ultimate Ownership	0.0097	-0.1568***
	(0.5452)	(0.0059)
Ultimate $Ownership^2$		0.1856***
		(0.0023)
Constant	-0.1998***	-0.1588***
	(0.0000)	(0.0004)
Ultimate Ownership turning point	–	0.4224
Firm Effect	Fixed	Fixed
Observations	4202	4202
R^2	0.6888	0.6896
F-Stat	139.20***	123.23***

Note: ***, ** and * represent 1%, 5% and 10% level of significance.

THE INFLUENCE OF INSTITUTIONAL SHAREHOLDERS ON LEVERAGE DECISION MAKING

To further confirm the findings of Table 5, i.e., the existence of Type II agency issues in decision making on leverage, this study further incorporates the influence of institutional ownership concentration in the regression. An interaction term for the institutional ownership concentration and ultimate ownership concentration is included in the regression. The rationale is that, with better skillsin monitoring the role played by institutional shareholders, a high institutional ownership concentration is able to increase the monitoring incentive and enhance corporate governance through a low leverage adoption based on signalling theory even with the presence of a high ultimate ownership.

The results in Table 5 show that the interaction termsfor the institutional ownership concentration and ultimate ownership concentration (with and without square) have significant negative relationships with leverage. It is consistent with our hypothesis that,with the

presence of a high institutional ownership concentration, the monitoring of opportunistic activities in a firm becomes active. A high institutional ownership concentration, on one hand, can increase the incentive to monitor the expropriation issues thatcould reduce thevalue of the investment; on the other hand, it has greater power to monitor or speak in meetings to block decisions that are harmful for shareholder value.

It is important to note that the interaction of the institutional ownership concentration with the square of the ultimate ownership concentration has a larger negative coefficient compared to when the interaction term involves no square of ultimate ownership concentration. This finding indicates that institutional shareholders tend to be more efficient in monitoring Type II agency issues via the signalling of lower leverage adoption when the firms' owners havean excessively high ownership concentration. The results of Table 5support hypothesis 3 of this study.

The overall results demonstrate that the involvement of institutional shareholders has reduced the level of leverage in firms, which, from the perspective of signalling theory, implies a reduction in Type II agency issues. In other words, the results indicate that the institutional ownership concentration affects leverage, and the results further prove that expropriation by a high concentration of ownership can be observed via the level of leverage, which consolidates the view of signalling theory.

TABLE 5. Regression results on the moderating role of institution shareholders

	UO x Institutional Ownership	UO^2 x Institutional Ownership
Firm Size	0.0328***	0.0320***
	(0.0000)	(0.0000)
Market-to-Book	0.0013	0.0014
	(0.4033)	(0.3789)
Tangible	-0.2378***	-0.2390***
	(0.0000)	(0.0000)
Dividend	-0.0021	-0.0013
	(0.7709)	(0.8573)
ROA	0.0326**	0.0324**
	(0.0208)	(0.0215)
D_Politics	0.0078	0.0076
	(0.1216)	(0.1332)
Ultimate Ownership	0.0393**	-0.1631***
	(0.0269)	(0.0041)
Ultimate Ownership* InstitutionOwnership	-0.0718***	
	(0.0002)	
Ultimate $Ownership^2$		0.2332***
		(0.0002)
Ultimate $Ownership^2$ * InstitutionOwnership		-0.1085***
		(0.0001)
Constant	-0.2073***	-0.1618***
	(0.0000)	(0.0003)
Firm Effect	Fixed	Fixed
Observations	4202	4202
R^2	0.6900	0.6908

Note: ***, ** and * represent 1%, 5% and 10% level of significance.

SENSITIVITY TEST

RECONFIRMING THE TURNING POINT ON THE NONLINEARITIES USING LONG-TERM DEBTS TO TOTAL ASSETS AS LEVERAGE

This study conducts further sensitivity tests. First, instead of using total debts to total assets to measure leverage, this study uses different proxy of leverage by using long-term debts to total assets. Table 6 reconfirms the turning point found in the results of Table 4 by using the new definition of leverage. The intention is to show whether different definitions of leverage can change the turning point of the nonlinear relationship. By not using the pre-set coding of the Stata program, this study conducts a subsample analysis based on the turning point found in Table 4. Two regressions are performed by using two subsamples, one with the ultimate ownership concentration equal to or lesser than the threshold value, i.e., 42%, and another with the ultimate ownership concentration larger than the threshold value, i.e., 42%. The results show that there is a consistent, significant negative relationship between ultimate ownership concentration and leverage,as shown in the subsample with the ownership concentration equal to or less than 42%,and that there is a positive relationship in the subsample with the ownership concentration greater than 42%.

TABLE 6. Reconfirming turning point of nonlinear relationship using subsample regressions with different proxy of leverage

	Ultimate Ownership Concentration < 42%	Ultimate Ownership Concentration > 42%
Firm Size	0.0476***	0.0223***
	(0.0000)	(0.0000)
Market-to-Book	0.0041*	-0.0002
	(0.0962)	(0.9222)
Tangible	-0.2143***	-0.2850***
	(0.0000)	(0.0000)
Dividend	0.0066	-0.0069
	(0.5584)	(0.4550)
ROA	0.0383**	0.0146
	(0.0403)	(0.5310)
D_Politics	-0.0010	0.0137**
	(0.8950)	(0.0491)
Ultimate Ownership	-0.1065***	0.1110***
	(0.0054)	(0.0006)
Constant	-0.3627***	-0.1004
	(0.0000)	(0.1388)
Firm Effect	Fixed	Fixed
Observations	2076	2126
R^2	0.6724	0.7581

Note: ***, ** and * represent 1%, 5% and 10% level of significance.

Using the new proxy of leverage as long-term debts to total assets, regressions are re-run to test the moderating role of institution shareholdings with the firm fixed effect and random effect specifications to check the consistency of the results. The results of Table 7 are consistent with the previous results obtained in this study in both the firm fixed effect and random effect specifications. The test further consolidates the findings of this study that institutional shareholdings are able to reduce Type II agency issues due to the expropriation of firm value at the expense of minority shareholder value when owners have full control over decision making.

TABLE 7. Sensitivity tests using different proxy of leverage with firm fixed effect and random effect

	Without Interaction Term	With Interaction Term	Without Interaction Term	With Interaction Term
Firm Size	0.0319***	0.0321***	0.0264***	0.0262***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Market-to-Book	0.0013	0.0016	0.0012	0.0014
	(0.3948)	(0.2893)	(0.3690)	(0.2884)
Tangible	-0.2263***	-0.2253***	-0.2258***	-0.2248***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Dividend	-0.0019	-0.0019	-0.0073	-0.007
	(0.7815)	(0.7839)	(0.2599)	(0.2757)
ROA	0.0346**	0.0375***	0.0345***	0.0364***
	(0.0102)	(0.0053)	(0.0091)	(0.0059)
D_Politics	0.0080*	0.0079*	0.0090**	0.0091**
	(0.0953)	(0.0986)	(0.0272)	(0.0254)
Ultimate Ownership	-0.1367**	-0.1430***	-0.1084**	-0.1094**
	(0.0119)	(0.0085)	(0.0237)	(0.0223)
Ultimate Ownership^2	0.1591***	0.2063***	0.1105**	0.1387***
	(0.0063)	(0.0005)	(0.0327)	(0.0084)
Ultimate Ownership^2 * InstitutionOwnership		-0.1075***		-0.0702***
		(0.0001)		(0.0043)
Constant	-0.1713***	-0.1743***	-0.1039***	-0.1027***
	(0.0001)	(0.0000)	(0.0003)	(0.0003)
Firm Effect	Fixed	Fixed	Random	Random
Observations	4202	4202	4202	4202
R^2	0.6991	0.7004	0.3528	0.3501

Note: ***, ** and * represent 1%, 5% and 10% level of significance.

CONCLUSION

This paper investigates the relationship between ultimate ownership concentration and leverage in the context of Malaysia. Given that the majority of Malaysian publicly listed firms have a high ownership concentration, investigating the ultimate ownership through direct and indirect shareholdings is able to contributenew findings to the literature on the influence of ownership concentration on the extent of leverage adoption. This study finds that ultimate ownership has a nonlinear relationship with leverage. Different from the findings of the existing literature, which show that a high direct ownership concentration increases the incentiveto monitor managerial decision making concerning leverage to prevent managerial opportunism, this study shows that a high ultimate ownership concentration induces opportunism by ultimate owners rather an alignment of interests with minority shareholders. The lack of awareness on the part of previous studies on the indirect shareholdings of firms' owners may fail to capture the true ownership concentration of the owners, which may be the factor responsible for the opposite findings obtainedin the present study.

The studyfurther suggests that a moderate extent of ultimate ownership concentration is able to enhance the incentive to monitor managers' decision making concerning leverage. It replaces the disciplinary role of leverage in monitoring opportunistic activities andthus reduces the level of leverage to act as a corporate governance mechanism while lowering the cost of financing. For policy makers, the finding suggests controlling the owners' shareholdings in a firm to prevent Type II agency problems. In this case, this study provides a reference that an ultimate ownership concentration of no greater than 42% is favourable.

Furthermore, by investigating the moderating role of institutional shareholders in the relationship between ultimate ownership concentration and leverage, it is found that the self-interest sign of ultimate ownerswho have high voting rights to make decisions is reduced in the presence of high institutional shareholding. This finding indicates that the increased monitoring incentive of institutional shareholders following an increase in institutional

ownership has efficiently replaced the disciplinary role of leverage in governing opportunistic activities. The findings contribute to the literature that the ownership concentration of institutional shareholders is critical in reducing Type II agency problems. The implication is that aconcentrated ownership structure as in the case of Malaysia should have a high institutional ownership structure to protect the value of minority shareholders.

The findings of this study lead to the notion that there should be a policy to regulate the shareholdings offirms' ownersto prevent full control over decision making from falling into the hands of an individual. Institutional shareholders should play a vital role in monitoring decisions that are detrimental to firms. Increasing institutional shareholdings is encouraged to increase the incentives of institutional shareholders who are well-equipped with professional knowledge and skills to closely monitor the destructive decisions made in firms. In summary, the findings of this study show that the extent of the ultimate ownership concentration should be regulated and that high institutional shareholdings should be encouraged to prevent Type II agency issues, especially in a multiple-chain shareholding structure environment.

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