OWNERSHIP STRUCTURE, FIRM VALUE AND THE MODERATING EFFECTS OF FIRM SIZE: EMPIRICAL EVIDENCE FROM INDONESIAN CONSUMER GOODS INDUSTRY

Abstract

Employing a panel data from a sample of Indonesia listed consumer goods companies covering the period of 2015-2019, the present study examined the effect of share ownership structure on firm value with firm size acting as a moderating variable. The estimation results showed that while the control hypothesis of institutional ownership was supported, the alignment hypothesis of managerial ownership did not hold. However, the present study found that firm size moderated the effect of share ownership structure on firm value. As firm size increased, managerial conducts were more inclined to conform with shareholders' interest. But on the other hand, as firm size increased, institutional investors tended to side with managers in extracting more value at the expense of other shareholders. These findings corroborated anecdotal evidence in empirical corporate finance that firm size mattered, and provided insights for policy makers relating to corporate governance implications of institutional ownership in large firms.

Keywords: Ownership structure, firm value, firm size, moderating effects.

Introduction

While there are many theories attempting to explain why firms exist (Walker, 2017), the neoclassical theory of the firm states that a firm exists to make a profit. Based on the microeconomics general equilibrium analysis, such profit is positive-maximum in terms of present value and accrues to the firm (Hicks, 1975). Fama and Miller (1972) demonstrates that although a firm is owned by many shareholders with differing utility functions and managed by non-owner professionals, the main objective of the firm that satisfies its shareholders, regardless of their individual preferences, should be maximization of the firm's current market value.

However, the emergence of modern corporations where ownership and control are separated (Berle & Means, 2017), as well as the rise of managerial capitalism (Marris, 1964) where managers actually control corporate resources, have raised a new fundamental problem known as the agency problem (Jensen & Meckling, 1976). It is argued that since managers of modern corporations are generally either not owners of such corporations or have insignificant portion of equityholdings, it is likely that they will pursue other objectives that maximize their own utility, resulting in suboptimization of firm value.

Nevertheless, finance literature suggests some control mechanisms for mitigating agency problems

(Dalton, Hitt, Certo, & Dalton, 2007), among others are: (i) corporate governance (Brennan & McDermott, 2004; Brennan, 2006), (ii) ownership structure (Benson & Davidson, 2009; Chen & Yu, 2012; Lozano, Martinez, & Pindado, 2016), (iii) product market competition (Giroud & Mueller, 2010; Tang, 2018), (iv) debt market monitoring (Jensen, 1986; Stulz, 1990), and (v) market for corporate control (Jensen, 1986, 1988; Kini, Krakaw, & Mian, 2004; Cheng & Indjejikian, 2009). Moreover, a recent study provides evidence on the role of social capital in mitigating agency problems (Hoi, Wu, & Zhang, 2019).

The present study aims to examine the effect of ownership structure on firm value within the context of agency theory, specifically relating to potential non-alignment of interests between shareholders and their appointed agents, namely managers. Additionally, the present study also explores the potential role of firm size in moderating the effects of ownership structure on firm value.

Value Maximization as the Principal Objective of the Firm

Currently there are two strands of thoughts on what should be the principal objective of the firm. The first strand is based on the neoclassical theory of the firm which claims that under the assumptions of

perfect competitive product and input markets, the main objective of the firm is profit maximization. Since the firm is owned by its shareholders, a profit-maximizing firm will maximize the wealth of its shareholders. With the proper functioning of capital markets, the shareholders' wealth will be reflected in the price per share issued by the firm, which in turn is the discounted distributed profits (i.e. dividends) per share expected to be paid by the firm over its life cycle to the shareholders. Therefore, according to this strand of thought, the principal objective of the firm is the maximization of shareholders' wealth.

The second strand of thought challenges the shareholders' wealth maximization principle, and claims that the stakeholders' benefit maximization is a more appropriate objective of the firm. Proponents of the stakeholder perspective (Freeman, 1994, 2010; Phillips, 2003; Freeman, Phillips, & Sisodia, 2020; Freeman, Wicks, & Parmar., 2004; Freudenreich, Lüdeke-Freund, & Schaltegger, 2020) claim that the shareholder party is only one of the many parties that have stakes in the firm. Firm's actions that aimed solely at maximizing shareholders' value might be detrimental to one or more other stakeholders' interests. Therefore, the firm's actions and its value creation processes should be taking into consideration both direct and indirect interests of all stakeholders, encompassing among others: shareholders, creditors, managers/directors, employees, customers, suppliers, government agencies, local communities, and the general public.

However, rather than contradict the shareholder and stakeholder theories, several other scholars have attempted to converge the two seemingly opposing perspectives on what should be the principal objective of the firm. While retaining the shareholder wealth maximization as the principal objective function of the firm, Jensen (2001) proposes what he calls *enlightened value maximization*, where in the long run the firm prioritizes certain objectives and makes necessary trade-offs among its stakeholders in order for the firm to sustain. Based on the Jensen's enlightened value maximization concept, Wallace (2003) and Queen (2015) found evidences that firms with higher levels of value creation tend to have stronger reputation in fulfilling non-investor stakeholders' interests. On the other hand, firms that create less or little value disappoint both shareholders and other stakeholders. In short, their findings suggest that creating value is a prerequisite to enhancing stakeholders' benefits.

Last but not least, in an attempt to converge the shareholder and stakeholder theories, Kucukyalcin (2018) proposes a stakeholder value maximizing model that considers the costs and benefits of the economic, social, and environmental externalities. In fact, if all the three types externalities are included in the calculation of free cash flow to the firm or to equity holders, then the value maximization principle sufficiently applies to both the shareholder and stakeholder theories. However, a challenge remains on determining which externalities to be included, and how to calculate them in deriving the free cash flow to the firm.

With the increasingly stringent and prudent regulations relating to the financial market, social and environmental issues, it is safe to assume that most major – if not all – costs of externalities are already accounted for as business expenses by firms. As an example, companies in the mining sector industry are required by law to have community development as well as mining areas reclamation programs. Other firms might also voluntarily engage in social and environmental activities in order to enhance their corporate reputation. If this is generally so, then the remaining free cash flows to the firm after deducting expenses relating to the social and environmental activities belongs to the capital providers, namely the creditors and the shareholders. Taking the present value of the expected future free cash flows to firm, the firm value is obtained; and it is consisted of the value of debt and the value of equity.

The present study utilizes a modified version of the approximate Tobin's Q originally introduced by Chung and Pruitt (1994) as a measure of firm value, with the following specification:

$$Q = (MVE + DEBT)/TA \qquad (1)$$

where Q is the Tobin's Q, while MVE is the market value of equity calculated as the product of a firm's share market price and the amount of common shares outstanding. $DEBT$ is the book value of the total debts, and TA is the book of the total assets. Tobin's Q is expected to be greater than 1.0, which indicates that the market value of the firm is greater than the book value of the firm as represented by its total assets. Therefore, a higher Tobin's Q means a relatively higher firm value, and vice versa.

The Role of Ownership Structure as a Mitigant for Agency Problem

Modern firms or corporations are owned by various types of shareholders. Boyd and Solarino (2016) classifies six non-individual ownership types, i.e: (i) institutional investor, (ii) managerial or insider,

(iii) blockholder, (iv) founder/family, (v) business group, and (vi) state-owned enterprise. However, regardless of the preferences of each types of owners, based on the Fisher's separation theorem, the firm should orchestrate its efforts and deploy its resources that will result in the highest profits possible, that in turn will increase its share price as well as the firm value.

In the literature, there are two hypotheses concerning the role of ownership structure in mitigating the negative impact of the agency relationship between shareholders and managers on firm performance and value (Dalton, Daily, Certo, & Roengpitiya, 2003). The first is the alignment or convergence of interest hypothesis, which refers to the effects of managerial ownership. While the second is the efficient-monitoring and control hypothesis, which refers to the effects of outsider ownership, such as institutional investors, blockholders, and business groups.

Managerial Ownership

Since managers are also individual, Fama and Miller (1972) recognizes the potential self-serving behavior on the part of managers, that they will maximize their own individual utility functions instead of maximizing the firm value which is the corporate criterion function of the managers. Fama and Miller (1972) argue that there must be sufficient additional mechanisms to mitigate the potential conflicts between the individual and the corporate criterion functions of managers. An example of such mechanisms is using stock options as an incentive scheme that will align the managers' interests with those of the shareholders. As the price per share increases – for instance - as a result of higher than expected firm performance, the managers will see that the value of their stock options or stocks if the options are exercised, will also increase. Additionally, Jensen and Meckling (1976) demonstrate a linear positive relationship between managerial ownership and firm value. Larger managerial ownership, reduces agency costs, and hence increases firm value. This is called the *alignment or convergent of interest hypothesis*, which predicts a positive relationship between managerial ownership and firm value.

Alternatively, Morck, Shleifer, and Vishny (1988) argue that as the proportion of managerial ownership increases, managers will have more voting power or influence, and become more entrenched. Higher level of managerial entrenchment with less outside control, would enable managers to consume more firm resources for personal gains that reduces firm value. This is called the *entrenchment hypothesis*, which predicts a negative relationship between managerial ownership and firm value.

Previous studies on the relationship between managerial ownership and firm value have provided mixed results. For example, Morck et al. (1988) found a curvilinear relationship between managerial ownership and firm value, as measured by Tobin's Q. To be more specific, they found that managerial ownership with zero to 5% and greater than 25% equity holdings has a positive relationship with firm value. On the other hand, for managerial ownership between 5% to 25%, the relationship with firm value is negative. However, using a panel data approach to test the curvilinear characteristic of the relationship found in Morck et al. (1988), a later study by Himmelberg, Hubbard, and Palia (1999) found no evidence that managerial ownership affects firm value.

Contrary to the results of Morck et al. (1988), Benson and Davidson (2009) found a positive and concave relationship between managerial ownership and firm value. While Morck et al. (1988) findings to some extent support the alignment hypothesis that a larger managerial ownership (i.e. above 25%) links managers interests with those of the shareholders of the firm, Benson and Davidson (2009) findings imply that a much larger managerial ownership provides managers with more power to divert the use of firm resources for their own personal gains.

Other studies by Chen, Guo, and Mande (2003), Adams and Santos (2006), McConnell, Servaes, and Lins (2008), Fahlenbrach and Stulz (2009), Yu, Supranzetti, and Lee (2012), Chen (2013), Sofiamira and Haryono (2017), and Octariawan and Ruslanti (2019) found a positive relationship between managerial ownership and firm value, while García-Meca and Sánchez-Ballesta (2011), and Marceline and Harsono (2017) found no evidence of such relationship.

A recent study by Fabisik, Fahlenbrach, Stulz, and Taillard (2021) might shed light on why firms with more managerial ownership are worth less. Using a panel data of US firms with more than 50,000 firm-years observation from 1988 to 2015, Fabisik et al., (2021) found a systematically negative relationship between managerial ownership and firm value. They explained that small firms with illiquid stocks tend to have larger managerial ownerships and lower Tobin's Q values. As a consequence, when small firms with illiquid stocks were excluded from the sample, they found similar results with that of Benson and Davidson (2009).

Based on the above analysis and previous empirical findings on the relationship between

managerial ownership and firm value, the present study hypothesizes the following:

H₁: Managerial ownership has a significant effect on firm value.

Institutional Ownership

Pound (1988) proposes three hypotheses concerning the relationship between institutional ownership and firm value, i.e. : (i) efficient-monitoring hypothesis, (ii) conflict-of-interest hypothesis, and (iii) strategic-alignment hypothesis. The first hypothesis refers to the institutional investors' superior ability to process information efficiently, thus making them informed investors in monitoring management performance. Furthermore, since institutional investors usually own large portions of firms' equity, they are able to monitor and control managerial conducts. This suits well with the notion that institutional ownership mitigates managerial agency problem. Therefore, based on the efficient-monitoring hypothesis, it is predicted that instutitional ownership is positively related with firm value.

The conflict-of-interest hypothesis asserts that because of fear of losing other profitable business opportunities with the firm, institutional investors are forced to side with managers. Similarly, the strategic-alignment hypothesis suggests that institutional investors and managers find it mutually beneficial to cooperate to extract value from the firm for their own benefits at the expense of the shareholders. Additionally, Bebchuk, Cohen, and Hirst (2017) provides an analysis that shows that institutional investors have less incentive to invest optimally in monitoring activities, and tend to side with corporate managers. Both the conflict-of-interest hypothesis and the strategic-alignment hypothesis predict a negative relationship between institutional ownership and firm value.

Previous studies on the relationship between institutional ownership and firm value have also provided mixed results. Mollah, Farooque, and Karim (2012) and Sofiamira and Haryono (2017) found no evidence of significant relationship between instutitional ownership and firm value. However, a study by Karpavičius and Yu (2017) found that greater institutional monitoring, as measured by larger instutitional ownership, has a positive effect on firm value through the reduction of agency cost of free cash flow. Other studies by Ferreira and Matos (2008), Bhattacharya and Graham (2009), Thanatawee (2014), Sienetra, Sumiati, and Andarwati (2015), Muniandy, Tanewski, and Johl (2016), and Lin and Fu (2017) have also found evidences supporting the efficient-

monitoring-control hypothesis of institutional ownership which predicts a positive relationship between institutional ownership and firm value.

On the other hand, Navissi and Naiker (2006) found a non-liner relationship between institutional ownership and firm value. Specifically, they found that institutional ownerships of up to 30% have positive impact on firm value, but ownerships above 30% reduce firm value. This finding suggests a support to the strategic-alignment hypothesis for the case of large institutional ownership, which predicts a negative relationship between institutional ownership and firm value. It seems that there are convergence-of-interests between managerial interests and institutional investor interests when institutional ownerships are appropriately large enough. Furthermore, Jennings (2005) found a negative relationship between institutional ownership and firm value, while Chen, Blenman, and Chen (2008) found a negative relationship between top institutional ownership and firm value. Both claimed that institution might be able to establish a business relationship with the management of the firm that negatively impact firm value.

Based on the above analysis and previous empirical findings on the relationship between institutional ownership and firm value, the present study hypothesizes the following:

H₂: Institutional ownership has a significant effect on firm value.

The Moderating Effects of Firm Size

As cited by Dang, Li, and Yang (2018) and Hashmi, Gulzar, Ghafoor, and Naz (2020), firm size plays an important role in empirical corporate finance. Although firm size has several alternative measurements, previous studies have provided numerous empirical evidences that firm size affects practically many important corporate finance decisions, such as: (i) investment decision (Kadapakkam, Kumar, & Riddick, 1998; Bakke & Whited, 2010; George, Kabir, & Qian, 2011), (ii) financing decision (Frank & Goyal, 2003; González & González, 2012; Kurshev & Strebulaev, 2015), (iii) dividend decision (Redding, 1997; Li & Zhao, 2008; Adjaoud & Ben-Amar, 2010; Moortgat, Annaert, & Deloof, 2017), and (iv) working capital decision (He, Mukherjee, & Baker, 2017; Jalal & Khaksari, 2020).

In the literature, firm size is generally predicted to have a positive relationship with firm value, where it is argued that larger firms: (i) have lower costs due to economies of scale and economies of size (Rasmussen, 2013); (ii) have lower bankruptcy costs (Ang, Chua, &

McConnel, 1982); (iii) are less risky because they are more diversified (Titman & Wessels, 1988), and therefore have lower cost of capital; (iv) have easier access to the capital markets, and borrow at more favourable interest rates (Ferri & Jones, 1979), and hence larger firms face less financial constraints in pursuing new projects with positive NPVs; and last but not least, (v) usually have larger fixed assets and debts, and therefore able to gain more tax savings from depreciation and interest expenses. In short, larger firms have higher value than their smaller counterparts due to their higher cashflows from interest and non-interest tax shields, lower expected costs of bankruptcy, lower costs of capital, and lesser financial constraints in pursuing new projects with positive NPVs.

However, it is also plausible that firm size is negatively related to firm value due to diseconomies of scale. Using organizational economics approach, Williamson (1975, 1996) asserts that as the size of the firm increases, so is the number of organizational bureaucratic layers. These additional hierarchical levels would result in more complex bureaucracy as well as additional costs of vertical and horizontal coordination among all level of managers. When firm size increases beyond its optimal level, then the firm would experience what Williamson (1975) calls as "control loss phenomenon". Based on Williamson (1975, 1996), Canback, Samouel, and Price, (2006) found that diseconomies of scale resulting from bureaucratic failure of large firms have a negative impact on firm performance.

As to the potential role of firm size in moderating the effects of ownership structure on firm value, there are two possible views. The first view is based on information economics, where larger firms are regarded as having less information asymmetry compared to smaller ones. Early study by Bhushan (1989) found evidence of a significant and positive relationship between firm size and the number of analyst following. With a larger number of analyst following, larger firms not only have lower information asymmetry, but also face stronger monitoring from the capital market than those of smaller firms. Based on this first view, firm size is expected to strengthen the monitoring role of institutional investors and capital markets, and therefore it is predicted that firm size has a positive moderating effect on the relationship between ownership structure and firm value.

The second view is based on the entrenchment hypothesis that an increase in share ownership of larger firms would enable owners with influential power to consume resources and extract more value from the firm for their personal gains. Therefore, based on this second view, it is predicted that firm size has a negative moderating effect on the relationship between ownership structure and firm value.

To summarize, based on the preceeding analysis, the present study hypothesizes the following:

H_3: *Firm size has a significant moderating effect on the relationship between ownership structure and firm value.*

Control Variables

To control for other variables that are empirically known to affect firm value, the present study includes profitability, leverage, and firm size as control variables. Profitability is expected to have a positive relation with firm value, because higher profitability will result in higher expected future dividends, and therefore will have a positive effect on share price and firm value.

The impact of leverage on firm value is less straight-forward. Borrowing from the trade-off theory of capital structure developed by Kraus & Litzenberger (1973), leverage is expected to have a positive relationship with firm value as long as leverage is still below its optimal level. Once leverage reaches its optimal level, *ceteris paribus*, any additional leverage beyond the optimal level will result in lower firm value. Beyond the optimal level, the marginal cost of financial distress resulting from additional debt will exceed the marginal benefit of interest-tax savings. Thus, lowering firm value.
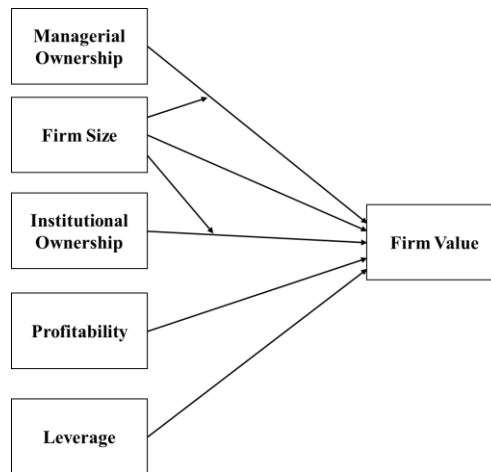
Figure 1. The conceptual research framework

Lastly, the theoretical background on the predictions of the relationship between firm size and firm value have been described above, and the empirical

findings of the present study will provide evidence on which prediction is supported.

Figure 1 presents the research conceptual framework to empirically examined the hypothesized relationships described above.

Research Methods

The sample is drawn from the population of consumer goods firms listed on the Indonesian Stock Exchange over the period of 2015-2019. After excluding companies with incomplete data, a panel data of 90 firm-year observations is obtained from a total sample of 18 firms over the 5-year observation period. All relevant data are obtained from audited financial statements and their accompanying notes.

As described in the previous section, the present study uses a modified version of approximate Tobin's Q (Chung & Pruitt, 1994) as a measure of firm value. It is computed by dividing the sum of market value of equity and book value of debt with the book value of total assets. Previous studies have utilized this approach, among others are Chen et al. (2003), Adams and Santos (2006), Bhattacharya and Graham (2009), Chen (2013), and Lin and Fu (2017).

Managerial ownership is computed as the percentage of shares held by management of the firm, and institutional ownership is computed as the percentage of shares held by institutions, consisting of financial institutions and non-individual blockholders. Firm size is measured by natural logarithm of book value of total assets.

To examine the effect of ownership structure on firm value with firm size as the moderating variable, the present study employs a panel data regression analysis. Firm value as measured by Tobin's Q is the dependent variable, while managerial ownership and institutional ownership – both individually as well as moderated by firm size – are the independent variables. As previously explained, to control for other variables that are empirically known to affect firm value, the present study includes profitability, leverage, and firm size as control variables.

The following equation (2) presents the panel regression model employed in this study.

$$Q_{i,t} = \beta_0 + \beta_1 MGR_{i,t} + \beta_2 MGR_{i,t} * SIZE_{i,t} +$$
$$\beta_3 INST_{i,t} + \beta_4 INST_{i,t} * SIZE_{i,t} +$$
$$\beta_5 NPM_{i,t} + \beta_6 DER_{i,t} +$$
$$\beta_7 SIZE_{i,t} + \varepsilon_{i,t} \qquad (2)$$

where: i is individual firm observation, t is the year of observation; Q = firm value as measured by Tobin's Q;

MGR = percentage of managerial ownership; $INST$ = percentage of institutional ownership; $SIZE$ = natural logarithm of book value of total assets; NPM = net profit margin; and DER = total debt-to-total equity ratio.

Results and Discussion

Table 1 presents descriptive statistics for the dependent, independent, and control variables. As shown in Table 1, Q has a mean value of 1.3037, indicating that on average, observed market values of sample firms exceed their book values. MGR has a mean value of 0.1077 or 10.77% share ownership. On the other hand, $INST$ has a mean value of 0.6297 or 62.97% share ownership. This share ownership data reveals that institutional holdings dominate share ownerships of the sample firms within the consumer goods industry.

Table 1
Descriptive Statistics

Variables	Mean	Max	Min
Q	1.3037	3.0814	0.1131
MGR	0.1077	0.6827	0.0002
INST	0.6297	0.9609	0.0509
NPM	0.0374	0.4548	-0,2398
DER	0.8674	3.3389	0.1635
SIZE*	11,046.87	96,537.79	133.83

*Note: *) In Billions of Rupiah*

Relating to the moderating and control variables, using its original value, $SIZE$ has a mean value of Rp. 11,046.87 billion; NPM has a mean value of 0.0374 or 3.74%; and finally DER has a mean value of 0.8673. Although the maximum value of DER is 3.3389, it can be concluded that on average, sample firms within the consumer goods industry tend to rely more on equity financing, as indicated by the mean value of $DER < 1$.

Table 2
Variance Inflation Factor

	Coefficient Variance	Centered VIF
MGR	0.2611	2.6128
INST	0.7617	1.3800
NPM	0.0122	1.1666
DER	0.0021	1.4928
SIZE	0.3402	2.6977

Table 2 reports the results of the multicollinearity test using the variance inflation factor (VIF) measure. Since none of the independent variable has an VIF value exceeding 10, it can be concluded that the

regression model in equation (2) does not suffer from the problem of multicollinearity.

To examine the hypothesized relationship between ownership structure and firm value with firm size as the moderating variable, the present study uses the ordinary least squares (OLS) method of estimation on a balanced panel data consisting of 18 firms with 5-year observations. The empirical model is estimated using E-Views 11 econometric software, and based on the results of various tests consisting of the Chow, Hausman, heteroskedasiticy, autocorrelation, and cross-dependence tests, the panel data are regressed using the cross-section weighted fixed effect model with white-corrected robust standard errors.

For comparison and discussion purposes, three empirical models are developed and estimated, i.e. : (1) the base model without the moderating effects of firm size (Model 1); (2) the managerial ownership quadratic model without the moderating effects of firm size (Model 2); and (3) the testable moderated model (Model 3). Tabel 3 presents the results of all the three models.

Table 3 shows that Model 3 has the highest adjusted R-squared with a value of 0.887. This means that after adjusting for the number of independent variables included in each of the respective regression models, Model 3 has the highest explanatory power in explaining the variance in firm value. The followings will discuss the results of the testable hypotheses using Model 3, and afterwards compare the results with those of the Model 1 and Model 2 regression models.

The results of the regression analysis of the Model 3 show that managerial ownership has a negative and significant effect on firm value. This means that higher managerial ownership will result in lower firm value. This result is contrary to the convergent-of-interest hypothesis, but consistent with the managerial enthrenchment hypothesis. This finding suggests that as the proportion of managerial share ownership increases, managerial power to extract value from the firm or implementing projects with negative NPVs for personal gains also increases, and thus reducing firm value. This result is similar to the recent study by Fabisik et al. (2021) who found a negative relationship between managerial ownership and firm value.

However, firm size could restraint managers from excercising such self-serving and value destroying activities. As evidenced by the positive and significant relationship between the interaction variable (*MGR*SIZE*) and firm value, it can be concluded that the negative impact of managerial ownership on firm value decreases as firm size increases. In other words,

as firm size increases, monitoring activities by shareholders and other stakeholders also increases, making it harder for managers to misuse valuable corporate resources for personal benefits. This argument is consistent with the notion that larger firms are monitored more closely by the capital markets as asserted by Bhushan (1989).

Table 3
Regression Results for Firm Value (Tobin's Q)

Independent Variables	Model 1	Model 2	Model 3
Constant			
coefficient	12.855***	16.911***	-4.505
standard error	4.020	2.680	3.931
p-value	(0.002)	(0.000)	(0.256)
MGR			
coefficient	0.185	8.811***	-95.553***
standard error	0.341	0.805	11.646
p-value	(0.588)	(0.000)	(0.000)
MGR*SIZE			
Coefficient			3.522***
standard error			0.412
p-value			(0.000)
MGR^2			
coefficient		-11.956***	
standard error		0.733	
p-value		(0.000)	
INST			
coefficient	-0.300***	-0.457***	33.281***
standard error	0.093	0.048	6.339
p-value	(0.002)	(0.000)	(0.000)
INST*SIZE			
coefficient			-1.215***
standard error			0.229
p-value			(0.000)
NPM			
coefficient	0.456	0.228	0.251***
standard error	0.584	0.299	0.076
p-value	(0.437)	(0.449)	(0.002)
DER			
coefficient	0.152***	0.035	0.084***
standard error	0.034	0.027	0.023
p-value	(0.000)	(0.191)	(0.000)
SIZE			
coefficient	-0.407***	-0.557***	0.218
standard error	0.143	0.096	0.142
p-value	(0.006)	(0.000)	(0.129)
Adj. R-squared	0.787	0.813	0.887
F-statistic	15.909	17.786	30.015
Prob (F-statistic)	0.000	0.000	0.000

The finding of a positive and significant relationship between institutional ownership and firm value in Model 3, supports the control-monitoring hypothesis of the role of institutional ownership in enhancing firm value. This finding indicates that as institutional ownership increases, their stake in the firm increases, so they will be motivated to put more resources to control managers and monitor firm performance. This finding corresponds to the findings

of previous studies such as Thanatawee (2014), Sienetra et al. (2015), Muniandy et al. (2016), and Lin and Fu (2017). All these studies confirm the efficient-control-monitoring hypothesis of ownership structure in mitigating the agency problem between share-holders and managers.

Interestingly, the results of the Model 3 regression analysis also show a negative and significant rela-tionship between the interaction variable (*INST*SIZE*) and firm value. This finding indicates that as firm size increases, institutional investors tend to cooperate with managers of the firm to extract more value at the expense of other shareholders. Following Pound (1988), it seems that larger firms provide more business opportunities for institutional investors, where the benefits from the businesses accrue more to the institutional investors rather than the firm. Another possible interpretation of this finding is that, as cited by Bebchuk et al. (2017), institutional investors have their own agency problems. Following Bebchuk et al. (2017), it might also be possible that as firm size increases, managers of the institutional investors get more personal benefits by siding with the firm managers, rather than overseeing the interests of the institutions they represent.

For comparison purposes, the following will discuss the results of the Model 1 and Model 2 regression analyses. The results from Model 1 show that managerial ownership has no significant effect on firm value, while institutional ownership has a negative and significant effect on firm value. Model 2 also finds a negative relationship between institutional ownership and firm value, which seemingly lend support to the the conflict-of-interest hypothesis and the strategic-alignment hypothesis which both predict a negative relationship between institutional ownership and firm value. These findings do not mean that they contradict the results of Model 3. Rather, it is because Model 1 and Model 2 have not take into account the moderating effect of firm size when regressing share ownerships against firm value. Evidently, firm size plays a signi-ficant role in moderating the effect of share ownerships on firm value.

Model 2 follows the managerial share ownership quadratic specification of McConnell & Servaes (1990), and the results show that the coefficient on managerial ownership is positive and significant, while the coefficient on managerial ownership squared is negative and significant. This result is the same with those of McConnell & Servaes (1990), Benson & Davidson (2009), and Yu et al. (2012). Fabisik et al. (2021) found a similar result when their regression model employed only the 500 largest firms subset of

their sample. All the these findings indicate that while managerial ownership aligns the interests of shareholders and managers at low levels of ownership, a much larger managerial ownership would entrenched managers, and would provide them with sufficient power to influence firm decisions that would maximize their utility but reduce firm value.

In relation to the control variables employed in the present study, it is found that profitability (*NPM*) is positive and significant in Model 3, but it is not significant in either Model 1 or Model 2. Leverage (*DER*) is positive and significant in both Model 1 and Model 3, but not significant in Model 2. The positive relationship between leverage and firm value, indicate that the benefits of using debt, such as interest-tax shield, exceed the potential costs of financial distress associated with debt financing.

The results of Model 1 and Model 2 show that firm size (*SIZE*) has a negative and significant effect on firm value. This finding indicates that firm size has a diseconomies of scale effect on firm value as asserted by Williamson (1975, 1996). However, Model 3 finds a non-significant relationship between firm size and firm value. It is most possible that in the Model 3 regression, the role of firm size has been appropriately and sufficiently captured as a significant variable that moderates the effect of ownership structure on firm value.

Conclusion and Implication

Within the framework of agency problems relating to the conflicts of interest between managers and shareholders, corporate finance literature suggests that managerial ownership and institutional ownership may mitigate the problems through the processes of alignment and control respectively. The results of the the present study show that while the efficient-monitoring-control hypothesis of institutional owner-ship is supported, the alignment and convergent-of-interest hypothesis of managerial ownership does not hold. Instead, the present study finds a negative relationship between managerial ownership and firm value, which may indicate that higher managerial ownership corresponds to more managerial power to divert corporate resources for managerial personal benefits with detrimental affect on firm value.

However, when ownership structure is moderated by firm size, the present study finds that firm size unambiguously affects the behaviors of managers and institutions in conducting their affairs vis-a-vis the firm. As firm size increases, managerial conducts are more inclined to conform with

shareholders interest. On the other hand, as firm size increases, institutional investors tend to side with managers in extracting more value at the expense of other shareholders. These findings corroborate anecdotal evidence in empirical corporate finance that firm size does matter.

It must be noted, however, that the findings of the present study are based on a limited number of sample from a single industry. Future research on the subjects is suggested to include more firms across various industry sectors, so that the results would be more generalizable. Additionally, further research on the impacts of firm size on the effectiveness of corporate governance mechanisms is recommended, with special attention on institutional ownerships in large firms.

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