SUBSTITUTABILITY OF AGENCY CONFLICT CONTROL MECHANISM: A SIMULTANEOUS EQUATION ANALYSIS OF INSIDER OWNERSHIP, DEBT, AND DIVIDEND POLICIES

Substitutabilitas Mekanisme Pengendalian Konflik Keagenan: Suatu Persamaan Simultan terhadap Kepemilikan Insider, Hutan, dan Kebijakan Dividen

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INTISARI

Pemisahan kepemilikan dan pengendalian pada perusahaan moderen memunculkan dua pihak yaitu para manajer sebagai agen dan pemilik sebagai *principal*. Biasanya, agen tidak bertindak dalam cara yang sesuai dengan keinginan *principal*, dan hal ini menyebabkan munculnya konflik keagenan ekuitas. Menurut teori keagenan, ada beberapa cara untuk mengatasi masalah ini, antara lain: meningkatkan kepemilikan insider, kebijakan hutang, dan kebijakan dividen. Beberapa penelitian tentang tiga kebijakan tersebut mengungkapkan bahwa ada hubungan saling ketergantungan antara ketiga kebijakan tersebut. Penelitian ini dibangun berdasarkan hubungan tersebut untuk menguji apakah kebijakan finansial, yaitu kebijakan hutang dan kebijakan dividen dapat disubstitusikan dengan kebijakan non finansial yakni kepemilikan *insider*, dalam rangka mengatasi konflik keagenan.

Dengan menggunakan analisis persamaan simultan terhadap data *cross sectional*, hasil penelitian ini menunjukkan bahwa terjadi substitusi antara kebijakan hutang dan kepemilikan *insider*. Tetapi, hubungan yang sama tidak terjadi antara kebijakan dividen dan kepemilikan *insider*. Hal ini didukung oleh adanya hubungan non–monotonis antara dividen dan kepemilikan *insider*. Penelitian ini juga menunjukkan bahwa dalam mengatasi masalah konflik keagenan ekuitas, penggunaan hutang akan memicu konflik keagenan hutang.

Kata kunci: *persamaan simultan -- konflik keagenan -- kepemilikan insider -- kebijakan hutang -- kebijakan dividen.*

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INTRODUCTION

The basic characteristic of a publicly traded company is that it has a highly diffuse ownership structure, which effectively separates owner-ship of residual claims from control of corporate decisions. This results into an agency relationship which Jensen and Meckling (1976: 308) define as "a contract under which one or more persons (the principals) engage another person (the agent) to perform some service on their behalf which involves delegating decision making authority to the agent". If the two parties to the said contract aim at maximizing respective interests, conflict of interests is expected to emerge.

This misalignment of interests results in the *equity agency conflict* - between *corporate management* and *stockholders*. The roots of equity agency conflict can be traced in the existence of excess cash flow in the firm (Jensen, 1986). Which is used by management to extend their power through over-investment and consumption of excessive perquisites (Rao, 1992). Another cause is the investment decision divergence, where-by investors would prefer high risk, high return projects but management prefer low risk projects to protect their employment positions (Crutchley and Hansen, 1989; Fama, 1980).

Agency theory suggests several mechanisms for controlling equity agency conflict. These include increased insider ownership, debt policy, dividend policy. Others are increased institutional or block holders, use of outside directors, managerial labor market and the market for corpo-rate control (Agrawal and Knoeber, 1996). Following the studies of Chen & Steiner, 1999; Jensen, Solberg, and Zorn, 1992; Hansen and Crutchley, 1989, this study considers only three mechanisms - insider ownership, debt policy and dividend policy. Institutional or block holders are en-tered in the model as exogenous control variables because corporate management does not determine them. Rather, as Bathala, Moon and Rao (1994) show, they are determinants of insider ownership.

Increasing managerial ownership - Increase of managerial stock ownership has the benefit of aligning managerial interests with those of stockholders (Jensen and Meckling, 1976), thereby reducing agency costs and facilitates quick decision making, however it can also lead into en-trenchment problems. The voting mechanism and takeover process[1] can be greatly influenced by the large share of managerial control. Increasing managerial ownership also has the disadvantage of making management's portfolio mal-diversified (Chen and Steiner, 1999; Crutchley and Hansen, 1989).

The use of debt policy - the use of more debt has an advantage of reducing total equity financing, thus reducing the magnitude of manager – Stockholder conflict (Jensen and Meckling, 1976; Crutchley and Hansen, 1989; Jensen, 1986; Chen and Steiner, 1999). Debt also has the impact of reducing excess cash flow (Jensen, Solberg, and Zorn, 1992; Jensen, 1986). The logic behind this thinking is that cash flow reduction will leave less money at the disposal of management, which will curtail its desire for consumption of excessive perquisites, and increment of its power through over-investment. Consequently, equity agency conflict is reduced. More importantly, is the fact that management will be forced to increase its commitment to work hard in order to be able to pay the periodical interest and principle as they accrue. Further, creditors carry out extensive scrutiny and monitoring of the firm's performance to determine its viability. This motivates managers to perform better in order to attract creditors.

Increase dividend payout ratio - by increasing dividend payout ratio, the firm increases chances of raising external equity capital. This has the effect of increasing external monitoring by security and exchange commissions, investment bankers, and providers of new capital (Crutchley and Hansen, 1989). Crutchley and Hansen emphasize that this monitoring will induce managers who seek to retain their employment to act more in line with the interests of Stockholders (cf. Rao, 1992). Further, dividends have an impact of appeasing outside stockholders thereby reducing the conflict between outsiders and insiders.

Extant literature show that the three agency conflict control mechanisms can be determined simultaneously (Chen and Steiner, 1999; Agrawal and Knoeber, 1996; Jensen, Solberg and Zorn, 1992). Agrawal and Knoeber (1996), postulate that where one specific mechanism is used less, others may be used more. This lends credence to the main theme of this research of substitutability between financial and non-financial mechanisms for controlling agency conflict.

Clearly therefore, it can be seen that the three corporate policies are related through the agency theory. Several financial economists and agency theorists have attempted to delineate this relationship. Bathala, Moon, and Rao (1994) for instance, simultaneously tested the interdependency of insider ownership, debt policy, and the impact of institutional ownership. Their research treated insider ownership and debt policy as endogenous variables, and institutional ownership and other variables as exogenous variables. Dividend policy, which is also frequently used in agency conflict reduction, was not investigated. Jensen, Solberg, and Zorn (1992) carried out a research to determine the cross sectional differences

in insider ownership, debt policy and dividend policy by using industrial data. The three corporate policies were analyzed by a three stage least squares method. Industrial data may lead to biased and inconsistent analysis especially where there is variability in firms' characteristics. Crutchley and Hansen (1989) tested the agency theory of managerial ownership, corporate leverage and corporate dividends by using a linear regression. The interdependency of the three endogenous variables was therefore not captured. Chen and Steiner (1999), using the non-linear simultaneous equation analysis, examined how managerial ownership relates to risk taking, debt policy, and dividends.

Apart from incorporating features of the mentioned studies, this research differs from them because its point of departure is the issue of substitutability of agency conflict control mechanisms. The previous research indirectly pointed to this issue but fell short of testing it explicitly.

It is imperative to note that in developing markets like Indonesia, there is a tendency for high insider ownership especially companies owned by Indonesians of Chinese origin. This uniqueness in corporate ownership structure and governance may have an impact on corporate policies under investigation. The high level of insider ownership can ease the problem of monitoring and align the interest of managers and shareholders (Jensen and Meckling, 1976), thereby reducing the equity agency conflict. This reduction in equity agency conflict is assumed to exacerbate the debt agency conflict. However, it is not clear how such a corporate ownership and governance structure relates to corporate leverage and corporate dividends in an agency theory perspective.

Basing on the earlier mentioned studies and with specific reference to Indonesian ownership structures, this research attempts to delineate the relationship between insider ownership, debt and dividend policies in an agency theory framework.

The rest of this paper is arranged as follows: section two deals with the review of previous literature and the development of the hypotheses. Section three concerns the research methodology in which data collection, operationalization of variables and the research model are discussed. Section four explains the results of the hypothesis testing plus a discussion of the results. In the fifth section, the conclusion, limitations and suggestions for future research will be presented.

Literature Review and Development of Hypotheses

In this section, previous researches that have attempted to explain the determinants of insider ownership, debt policy and dividend policies

are described. A motivation of the joint relations among these variables is also undertaken.

Chen and Steiner (1999), use the non-linear simultaneous equation analysis to determine the relationship between managerial ownership, risk taking, debt policy and dividend policy. Their results indicate that managerial ownership helps to resolve the agency conflicts between external stockholders and managers. Evidence of substitution - monitoring effects between managerial ownership and debt policy, between managerial ownership and dividend was also found. In his study about the agency cost explanation of dividend policy, Hartono (1998) found that there was a significant impact of dividend on debt ratio in the minimization of agency conflict. In a way, this study validated Easterbrook's (1984) study that dividends and capital structure decisions (debt) may be used to control agency conflict.

Noroha, Shome, and Morgan (1996) used a system of equations to determine the simultaneity between dividends and capital structure decisions. Their findings show simultaneity exists between the two variables in a monitoring rationale sub sample. It was found that for firms characterized by low growth and no block holder, dividend constituted a relevant mechanism for reducing agency conflict and as a consequence, the interaction between capital structure decisions and dividend policy occurs. Agrawal and Knoeber (1996) examined the use of seven mechanisms to control agency problems. These are shareholdings of insiders, institutions, large block holders, use of outside directors, debt policy, the managerial labor market and the market for corporate control. They found that there exists a relation between four of the control mechanisms: Insider holdings, outside directors, debt, and corporate control activity. Their findings are consistent with the optimal use of each of the control mechanism except for outside directors. Their study however did not analyze dividend policy, which is also used to control agency problems.

Bathala, Moon, and Rao (1994) used a two stage least square method to investigate the influence of institutional shareholders on insider ownership and debt ratio in reducing the agency conflict. They concluded that insider ownership could help to align managerial interest with those of outside shareholders.

Jensen, Solberg, and Zorn (1992), use a three stage least squares on a cross - sectional industry data to investigate the relationship between insider ownership, debt, and dividend policies. Their results show that firms with higher insider ownership choose lower levels of debt and dividends. It can therefore be adduced that in an effort to control equity

agency conflict, firms with high levels of insider ownership tend to use less debt and dividend. This indirectly provides the basis for the major theme of this study that there exists substitutability of financial policies and non-financial policies in an effort to stem agency problems.

Friend and Lang (1988) investigate the effect of managerial self-interest on debt policy. They conclude that managerial ownership has an inverse causal relation to debt, which implies some level of substitutability between insider ownership and debt exists.
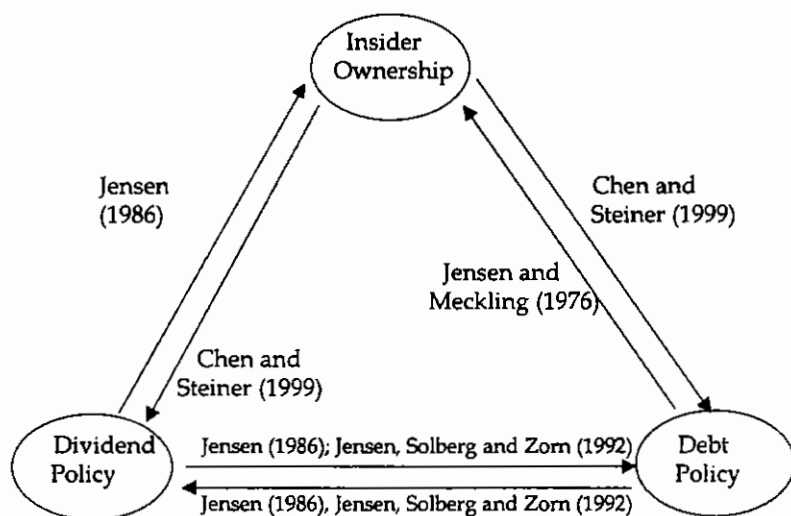
Figure 1.   Summary of the relationship among the three variables according to selected studies

Insider ownership

The determinants of insider ownership have been argued by previous researchers to include debt and dividends, in addition to institutional ownership, business risk, and size of the firm. Jensen and Meckling (1976), argue that the use of debt capital lessens the need for external equity, and thus raises the proportion of insider ownership in the firm. Friend and Lang (1988) on the other hand investigated the causal relation from debt to insider ownership. They hypothesized an inverse causality may proceed from debt to insider ownership. It is logical to argue that exces-

sive use of debt increases bankruptcy risk, which in turn increases non-diversifiable risk to the managers, thereby discouraging insider ownership. Moreover, the use of debt increases the external monitoring of the performance of management. It can also be argued that the need to pay periodical interests and principle as they accrue leaves less money at the disposal of management. As a consequence, the use of debt to control agency problems has an effect of disgorging excess cash flow from the company. It also instills discipline in management to efficiently use the cash available. This has an overall impact of reducing agency costs. This is consistent with Jensen, Solberg and Zorn's (1992) findings that the increasing use of debt to control agency problems leads to less use of insider ownership for that purpose.

Basing on prior studies of Chen and Steiner, 1999; Bathala, Moon and Rao, 1994; Jensen, Solberg and Zorn, 1992; Crutchley and Hansen (1989), it is hypothesized that debt serves to reduce problems associated with cash flow. Thereby controlling the agency conflict leading to less use of insider ownership for the same purpose. This leads to hypothesis 1A.

Hypothesis 1A: Debt serves as a substitute-monitoring force for insider ownership leading to an inverse causal relation from debt to insider ownership.

Chen & Steiner (1999) argue that the payment of dividends goes a long way to reduce the agency conflict. Their empirical analysis also show that companies that use dividends to control agency problems use less of insider ownership to control agency problems. Therefore, if the use of dividends to control agency problems leads to less use of insider ownership for the same purpose, then they can be treated as substitute control mechanisms. It is hypothesized that higher levels of dividend payout ratio serve to reduce problems of free cash flow (Jensen, 1986) and increase the monitoring of market place leading to less use of insider ownership control agency problems. This leads to hypothesis IB.

Hypothesis IB: Dividends serve as substitute-monitoring forces for insider ownership leading to an inverse causal relation from dividends to insider ownership.

Other variables that can be argued to effect insider ownership are institutional owner, business risk, and the size of the firm. Bathala, Moon, and Rao (1994) show that institutional owners exercise an active monitoring role consistent with their significant stake leading to an inverse relationship to insider ownership. Jensen, Solberg, and Zorn (1992) argue that the higher the business risk of the company, the lower the in-

sider ownership, this is consistent with the motive to protect their invest-
ments. Simple reasoning suggests an inverse relation between firm value
and insider ownership. Essentially, financial constraints prevent manag-
ers from owning a high percentage of equity as the total equity value
increases.

Debt Policy

Friend and Lang (1988) investigated the effects of managerial self-
interest on debt policy. They concluded that insider ownership has an
inverse causal relation to debt. The reasoning behind this conclusion is
that insiders with a major stake in an organisation are less diversified,
and therefore have more incentive to reduce financial risk from excessive
use of debt which include bankruptcy and financial distress. Chen and
Steiner (1999) noted that the increased use of debt may reduce the equity
agency conflict. Therefore, if the level of insider ownership and the level
of debt serve as substitute monitoring forces, then a negative causal rela-
tion is expected from insider ownership to debt policy. This leads to hy-
pothesis 2.

Hypothesis 2: Insider ownership causes lower levels of debt due to a sub-
                   stitution-monitoring effect.

Jensen, Solberg, and Zorn (1992) reported a negative causal relation
from dividends to debt policy. The underlying logic being that, firms with
high dividend payouts find debt financing less attractive than equity fi-
nancing. Jensen's (1986) free cash flow hypothesis also suggests an in-
verse relation from dividends to debt policy. Several control variables are
included in the debt model based upon arguments made in previous re-
search. These include institutional ownership, business risk, profitability,
and fixed assets.

Bathala, Moon and Rao (1994) argue that increasing institutional
ownership can offset the need for debt to reduce agency costs. Thus, a
negative causal relation is expected from institutional ownership to debt.
Jensen, Solberg and Zorn (1992) argue that firms with higher business
risk tend to use less debt in order to reduce total risk. Chen and Steiner
(1992) postulate that profitable firms use less debt because they have suf-
ficient funds to cover their financial requirements. Scott's (1976) secured
debt hypothesis indicates that firms with a high ratio of fixed assets tend
to use more debt, because fixed assets provide security for debt.

Dividend policy

Rozeff (1982) argues that firms that have a high percentage of insider ownership tend to pay lower levels of dividends. This was also reported in the Chen and Steiner's (1999) study that showed that insider ownership was inversely related to dividend payout ratio in an agency conflict resolution framework. Basing on these studies, it is anticipated that the level of insider ownership will inversely impact the dividend payout ratio. This leads to hypothesis 3:

Hypothesis 3: Due to the fact that dividends are part of the firm's monitoring/bonding package and serve to reduce agency costs, firms will establish higher dividend payout ratios when insiders hold a lower fraction of equity.

The payment of interest and principle leaves less cash available for dividends. As a result, a negative relationship between debt policy and dividend policy is expected (Jensen, Solberg, and Zorn, 1992).

Other predictors of dividend policy are institutional ownership, business risk, profitability, and growth. From an agency theory perspective, institutional investor's increased monitoring role, act as an alternative means to control agency costs (Agrawal and Knoeber, 1996). Since dividends also play the role of aligning shareholder interests with those of management, then through the substitution effect an increase in institutional ownership leads to a decrease in dividend pay out ratio.

Crutchley and Hansen (1989) postulate that a business risk is negatively related to dividend payout ratio. Reasoning that managers should use less dividends when they are faced with high risk. When profits are high, dividend payout should follow and *vice verse* for low profitability (Partington, 1989; Jensen, Solberg, and Zorn, 1992). This results in the expectation of a positive relationship between profitability and dividend payouts. A firm with high sales growth is expected to have high investment opportunities. According to the residual dividend theory and investment opportunity schedule (Brigham and Gapenski, 1996), dividends are treated as residual expenditure after all positive net present value projects have been financed. Clearly therefore, the higher the investment opportunities, the higher the growth, and the lower the dividend pay out ratio.

RESEARCH METHODOLOGY

This research utilizes secondary data. The population of this research consists of both manufacturing and service firms registered in Jakarta

Stock Exchange. Financial sector and regulated companies are excluded because they tend to have higher debt to equity ratios for the equivalent levels of risk (Jensen and Meckling (1976). A cross sectional time horizon is used on firm data to capture a snap shot analysis of the relationship between the variables under study at one point in time in 1996. The use of cross sectional data differs from other researches about agency theory. For example, Chen and Steiner (1999) and Crutchley and Hansen (1989) use data over long periods of time. Through purposive sampling (Cooper and Emory, 1995), the following criteria were used to choose the sample: companies must have insider owners, must have paid dividend and must have a debt policy. A total of 63 companies fulfilled these criteria.

Based on the literature review and the hypotheses discussed in section two, a simultaneous equation model[2] to be solved by 3 SLS[3, 4] is defined by three equations as follows.

$$INSID = a_0 + a_1 DEBT_{it} + a_2 DIV_{it} + a_3 INST_{it} + a_4 BUSRISK_{it} + a_5 SIZE$$

$$DEBT = b_0 + b_1 INSID_{it} + b_2 DIV_{it} + b_3 INST_{it} + b_4 BUSRISK_{it} + b_5 PROFIT_{it-1} + b_6 FIXASS_{it}$$

$$DIV = c_0 + c_1 INSID_{it} + c_2 DEBT_{it} + c_3 INST_{it} + c_4 BUSRISK_{it} + c_5 PROFIT_{it-1} + c_6 GROWTH_{it}$$

The following notation is used to define variables in the empirical model:

INSID = The ratio of managers', directors' and commissioners' shareholding to the total shares outstanding.

DEP = The ratio of long-term debt and long-term liabilities to the total assets of the firm.

DIV = The ratio of cash dividend paid out to net operating income.

INST = The percentage of shares held by institutional investors and blockholders.

BUSRISK = The standard deviation of common stock returns.

SIZE = The natural logarithm of the market value of the firm.

PROFIT = The ratio of operating income to total assets.

FIXASS = The ratio of fixed assets to total assets of the firm.

GROWTH = The sales growth of the firm over the past three years
Presentation and Discussion of Empirical Results

In this section, empirical findings are reported. Table 1 reports descriptive statistics for all the variables defined in section 3 of this research. Table two presents the non-linear three-stage least squares parameter estimates of equations.

Table 1. Descriptive Statistics

Variable	N	Mean	Standard Deviation
INSID	63	.1824	.2032
DEBT	63	.3465	.1854
DIV	63	.3284	.3352
INST	63	.4654	.2784
FIXASS	63	.3844	.1854
BUSRISK	63	.1590	8.517E-02
SIZE	63	25.6484[a]	1.7237
GROWTH	63	.1046	.1079
PROFIT	63	8.984E-02	5.416E-02

[a]   this figure represents the natural logarithm of the market value of firms.

In table 1, the average percentage of insider ownership (INSID) is 18.24 with a standard deviation of 20.32. The debt ratio (DEBT) has a mean of 34.65% with a standard deviation of 18.54%. Dividend payout ratio (DIV) has a mean value of 32.84% with a standard deviation of 33.52%. The percentage of institutional ownership (INST) is 46.54% for the average firm and the standard deviation is 27.84% the average percentage of fixed assets (FIXASS) is 38.44% with a standard deviation of 18.54%. Business Risk has an average of 15.9% with a standard deviation of 0.00851. The natural logarithm of size has a mean value of 25.64 with a standard deviation of 1.72. The average firm has a growth rate of 10.46% with a standard deviation of 10.79%. Profitability has a mean value of 8.984E-02 (0.00898) with a standard deviation of 5.416E-02 (0.00542).

Table 2. Three SLS Results

Independent Variable	Dependent Variable		
	INSID	DEBT	DIV
Constant	0.513 (2.038)**	0.124 (1.163)	-0.329 (-1.621)
INSID	-	-0.363 (-2.449)**	1.029 (3.521)***
DEBT	-0.257 (-2.485)**		0.719 (2.815)***
DIV	0.172 (3.556)***	0.130 (2.159)**	
INST	-0.532 (-8.799)***	-0.112 (0.297)	0.691 (3.343)***
FIXASS		0.232 (2.228)**	
BUSRISK	-0.397 (-2.039)**	0.221 (0.358)	0.101 (0.204)
SIZE	-0.72223E-02 (0.7266E-01)		
GROWTH			-0.635 (-1.603)
PROFIT		-0.101 (-0.282)	0.896 (1.241)
Equation R^2	0.5749	0.147	0.092

Weighted system R^2 = 0.8266   *   Significant at 0.1 level
System X^2 = 110.18***   **   Significant at 0.05 level
t ratios in parentheses   *** Significant at 0.01 level

INSID   = Insider ownership   BUSRISK = Business Risk
DEBT   = Debt ratio   SIZE   = Size of the firm
DIV   = Dividend payout ratio   GROWTH = Sales growth
INST   = Institutional and blockholders   PROFIT   = Profitability of the firm
FIXASS = Fixed assets

Table 2 presents parameter estimates from using a three stage least squares method to jointly estimate equation 1 – 3. Column 2 table 2 shows results of insider ownership (INSID) equation. Of the endogenous variables, each is significant. Consistent with hypothesis 1A, debt ratio (DEBT) is negatively related to insider ownership (INSID) at 0.05 significance level. Hypothesis IA is therefore accepted. This result is supportive of the argument that firms substitute debt policy for insider ownership in controlling agency conflict (Chen and Steiner,.1999).

Dividend policy variable (DIV) has a positive coefficient significant at 0.01 level to insider ownership. This contradicts hypothesis 1B. This however may be explained by the fact that insiders use their dividends to reinvest in the company thereby increasing their ownership.

Of the control variables in the insider·ownership equation, institutional ownership (INST) has a negative relation to insider ownership, significant at 0.01 level. This is consistent with the substitute-monitoring role of institutions (Bathala, Moon and Rao (1994)). Business Risk (BUSRISK) has a negative relationship to insider ownership and significant at 0.05 level. This implies that as the firm's business risk increases, insiders will be reluctant to own controlling shares of the company. Size has a negative though not significant relation to insider ownership. This follows Chen & Steiner's (1999) argument that financial constraints prevent managers from owning high percentage of equity as the total equity of the firm increases.

Column 3 table 2 shows results of the debt ratio (DEBT) equation. Both of the endogenous variables are significant at 0.05 level. Insider ownership (INSID) has a negative and significant relation to debt ratio. This is consistent with the findings of Chen and Steiner (1999); Friend and Lang (1988). The substitution effect is therefore proved between insider ownership and debt ratio. Hypothesis 2 is therefore accepted.

Dividend has a positive and significant relationship with debt ratio. This is contradicting the trade off of fixed payments theory (Jensen, Solberg and Zorn, 1992). It can however be explained by agency theory which posts that when firms pay high dividends, they are forced to go to the capital market to search for funds to replace that paid as dividends, leading to a positive relationship between dividends and debt.

Results of the control variables indicate that institutional ownership (INST) has a negative non-significant relation to debt ratio. The sign is consistent with Bathala, Moon and Rao's (1994) postulation that institutions replace the debt as a monitoring force. Business risk (BUSRISK) also has a positive non-significant relation to debt ratio. This is contrary to theory, but since the standard deviation of stock returns was used as proxy for business risk, it is possible that creditors do not consider stock return volatility in giving debt to companies. Profitability (PROFIT) has a negative but not significant relationship with debt ratio. This finding is consistent with those of Chen and Steiner, (1999); Jensen, Solberg and Zorn (1992). Fixed assets (FIXASS) present a positive relationship significant at 0.05 level. This is in support of Scott's (1977) secured debt hypothesis.

Column 4 table 2 shows results of the dividend payout ratio equation (DIV). It is found that insider ownership has a strong positive impact on dividend policy. This contradicts findings of Chen and Steiner (1999), Jensen, Solberg and Zorn (1992). It however supports Scholey and Barney's (1994) non-monotonic relationship between insider ownership and dividend policy. Scholey and Barney (1994) posit that increase of insider ownership decreases dividend pay out ratio up to a certain point, beyond which, any further increase in insider ownership leads to increase in dividend payout. To prove this non-monotonic relationship, this study split the sample into 2 groups. The first one with the level of insider ownership less than 10% and the other with greater than 10% insider ownership. Indeed it was found out that at below 10% level of insider ownership, increased insider ownership led to a decrease in dividend payout ratio. The sub sample with greater than 10% insider ownership revealed a positive relationship between insider ownership and dividend payout. Schooley and Barney offer an agency-related explanation of entrenchment of insiders. It may also be explained by the fact that increased insiders may increase dividends as a benefit for themselves. Debt ratio (DEBT) was found to have a significant positive relationship with dividend policy. This finding is contrary to those of Chen and Steiner (1999); Jensen, Solberg and Zorn (1992). However, it may be explained by the fact that debt is used to pay dividends in order to align shareholder interests but exacerbating debt agency conflict. Institutional ownership (INST) has a positive relationship to dividend policy significant at 0.01 level. This finding is consistent with that of Moh'd, Perry, and Rimbey (1995) that suggests that high dividends are meant to attract and compensate institutions for their monitoring role. Business Risk (BUSRISK) has a positive non-significant relation to dividend policy. This is contrary to earlier studies of Chen and Steiner (1999), Jensen, Solberg, and Zorn, (1992). It may be explained by the fact that management raises a company's dividends in an effort to curtail the volatility in stock returns. Profitability (PROFIT) has a positive but not significant relation with dividend. The sign is consistent with the theory and the findings of Jensen, Solberg and Zorn (1992) that posit that the higher the profitability the higher the dividends and vice verse. Growth has a negative non-significant relationship with dividend. This is consistent with the findings of Chen and Steiner (1999) and Jensen, Solberg and Zorn (1992) that posit that when there is high growth, companies use their income for investment purposes, leaving less money available for dividends.

CONCLUSION AND SUGGESTIONS FOR FUTURE RESEARCH

This study builds on several veins of research. By simultaneously modeling the relations between insider ownership, debt policy and dividend policy, it was possible to analyze the existence of the substitution effect between the three agency control mechanisms. This study focuses on how insider ownership relates to debt policy and dividend policy. It was found that the use of high debt ratio substitutes for the use of insider ownership in resolving the conflict between external stockholders and managers. However, contrary to the widely held view that high insider ownership leads into low levels of dividend payout ratio, this study documents a non-monotonic relationship between the two. Institutional ownership was revealed as a major determinant of both the levels of insider ownership and dividend policy, which have a negative and a positive relationship respectively.

Future research on this topic should examine the interrelationship among other agency conflict control mechanisms to see whether substitutability occurs among them. In this research, the standard deviation of the stock returns was used as a proxy for business risk future research should consider using another proxy like earnings volatility to see if it has a better predictive impact on insider ownership, debt and dividend policy. Since there is little theory about the non-monotonic relationship between insider ownership and dividend policy, future research should endeavor to unearth the explanation of this occurrence.

FOOTNOTE

1. In a takeover process especially the hostile one, large managerial control can stifle the process even if it is supposed to accrue into stockholder benefit.

2. A Simultaneous equation analysis is based on the assumption that each of the three major variables is a function of the other two plus a vector of control variables.

3. 3 SLS procedure is efficient and produces consistent results. It also overcomes classical econometric problems of multicolinearity.

4. A test of identification revealed that equation one is over identified and equations two and three are exactly identified.

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