RUDOL TOBING_AGENCY COST

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DOES THE AGENCY COST MEDIATE THE INFLUENCE OF DETERMINANTS OF CAPITAL STRUCTURE ON THE CORPORATE DEBT RATIO? (AN EMPIRICAL STUDY OF THE DIFFERENCES IN DEBT RATIO BETWEEN THE LISTED COMPANIES OF MANUFACTURING SECTOR AND THE NON-MANUFACTURING SECTOR IN INDONESIAN STOCK EXCHANGE)

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Abstract

The purpose of this study is to investigate the mediating effect of agency cost toward the capital structure differences between the industrial companies of manufacturing sector and non-manufacturing sector listed in the Indonesian Stock Exchange (IDX).This study proposed descriptive research by applying path analysis to analyze mediating effect on influences of capital structure determinants toward debt ratio. The results depicted that the insider ownership and dividend yieldin both sectors were not significant have positive effect on the agency cost. While growth opportunity and firm size significant positively effected on agency cost. The agency cost has significant positive effect on debt ratio. Based on the result of path diagram, this study found that the agency cost mediated the effect of determinants of capital structure onthe corporate debt ratio. This study concluded that there weresignificant differences of agency cost effect on debt ratio between the companies in bothsectors. Theeffect of intervening variable of agency cost on debt ratio of manufacturing sector was higher than the non-manufacturing sector. Debt ratio in both sectors has no significant differences.

Keywords: Agency, Debt Ratio,Dividend, Growth Opportunity, Path Analysis

Introduction

Generally to achieve high firm value investors hand over the management to the agent business. To increase the value, managers often behave as opportunistic agents to make decisions that are risky by creating debt that causes high financial leverage for the company's capital structure (Ross *et al*, 2009; and Booth *et al*, 2014). The value of the firm that is affected by the distribution of ownership among insiders who enjoy the benefits and outsiders might not benefits has been expressed by Jensen & Meckling (1976). In the framework of their thinkings they showed that increasing of insider ownership will reduce debt financing and agency conflict. Lumbantobing (2015) showed that firm size and growth opportunities have significantly positive effect on corporate debt policy. The larger firm size and growth opportunities there will be more funds used to run the company's operations and realize the growth opportunities of investment through external financing. Increasing external funds when firm size and investment growth are more higher will increase the agency conflict between shareholders and managers. Commonly to reduce the agency conflict, companies use dividend policy by dividend payment to reduce dicritioner cost that available to the managers (Cruthley & Hansen; 1989). Based on the gap problem of the contradiction theories and empirical findings from various studies of capital structure, the proposed problem statement in this study is "*Does the agency cost mediate the influence of determinants of capital structure toward the differences in debt ratio between industrial companies of manufacturing sector and non-manufacturing sector which listed in Indonesia Stock Exchange?*"

Purpose of the Study

The special purpose of this study is to investigate and test the mediating effect of agency cost on the influences of determinants of capital structure toward the differences in debt ratios between companies of manufacturing sector and non-manufacturing sector listed in the Indonesian Stock Exchange.

Literature Review

Crutchley & Hansen (1989), Chen & Strange (2005) revealed that agency problem arises because of the separation between the owner as a shareholder with the manager as an agent. Managers often act as an agent of a personal interest rather than the interests of the companyso that raises organizational conflict. The organizational conflictincurs costs that are resolution costs to the conflict of interest between principal and agent, which called as agency cost. Ross *et.al* (2009) definedthatagency costs are all kinds of fees are borne by shareholders in order to prevent or surpress the agency problems and maximize shareholders'wealth. To motivate the managers perform their functions properly, the managers

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should be given incentives and adequate supervision. Jensen & Meckling (1976) argued that agency cost can be reducedif managers has equity or shares ownership in company. Equity ownership by the managers is needed for all decisions taken by the managers do not only responsible to the owner of the company, but also by their selves. Lumbantobing (2008) quoted Jensen (1989) and Damodaran (2001) revealed that agency conflict can be surpressed by increasing debt so that decreases waste that can be done by managers. The use of debt makes the company obliged to pay interest and principal payable periodically, so that reduce the managers willingness to usefree cash flow of existing funds in the company to finance unprofit activities.
Jensen and Meckling (1976) argued that the distribution of ownership between insider ownership and outsider can affect the value of the company. The increase in insider ownership will reduce the agency conflict through the reduction of incentives in taking advantage. The greater insider ownership, the differences of interest between shareholders and company managers will be lower, they are acting more cautious in taking a decision. Lumbantobing (2015) quoted Chen & Strange (2005)revealed that insider ownership has a positive relationship with the capital structure, which impacts on the efficiency of the debt ratio has positive influence on managerial share ownership.

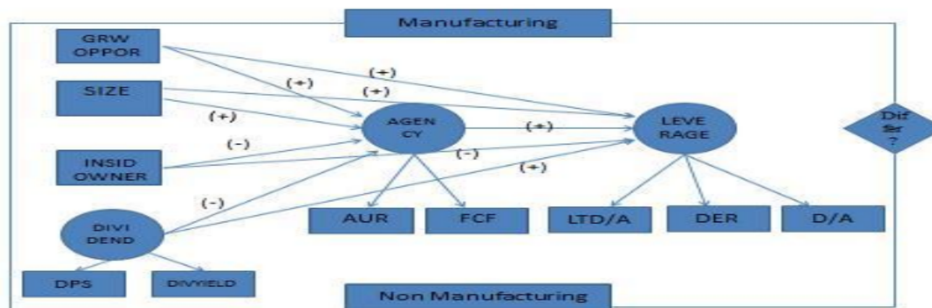
Firm size indicates the amount of total assets, sales and market capitalization. Lumbantobing (2008) quoted Barney (2002) who argued that large firms were diversified tend to take advantage of high debt capacity. To obtain additional funding from the creditor without violating debt agreements, the managers raise the political costs on the disclosure of financial statements. This led to increase agency costs along with increasing of the firm size.

Jensen (1986) as quoted Fatmasari (2011) stated that firms with high investment opportunities tend to have a high growth rate, active investing, has a lower free cash flow and a low assets in place. In such condition the company will tend to use external funding sources in the form of high debt. Spend these assets are assumed to be lead agency costs on companies, where managers can behave wasteful in investing the cash available, as described Myers & Majluf (1984) in the pecking order theory.

Dividend policy plays an important role in determining the value of the company. Investors will feel more secure to obtain current cash dividends now more certain than waiting for future cash earned from risky capital gains (Gordon, 1959 in Lumbantobing, 2008). Further, Rozeff (1982) and Easterbrook (1984) explained that the dividend payments will reduce the sources of funds controlled by managers, thereby reducing agency costs. Although the dividend payment can reduce agency conflict, but on the other hand can lead to charges. Costs will arise when a company pays high dividends while the cash flow is obtained from internal sources is no longer adequate, prompting the company to meet the needs of debt funds (Lumbantobing, 2008).

Theorical Framework and Hypotheses

Based on the framework constructed of theoretical concepts and review of the literature, it can be constructed a building on the model of empirical research studies on the pictographs are as below:



Source: The proposed empirical research model was developed in this study
Research Hypotheses are as below:

H1: Agency cost mediates positive the influence of growth opportunity toward debt ratio
H2: Agency cost mediates positive the influence of firm size toward debt ratio
H3: Agency cost mediates negative the influence of insider ownership toward debt ratio
H4: Agency cost mediates positive the influence of dividend toward debt ratio
H5: The mediating effect of agency cost on the effects of determinants of capital structure toward debt ratios in the industrial companies of both sectors are different

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Materials and Methods

The objects of this research were the listed companies which have been classified to the industrial sector of manufacturing and non-manufacturing sectors in Indonesian Stock Exchange (IDX), period of year 2012 to 2014. The variables in this study consist of Independent variables: (a) Dividen Yieldexpresses ratio of how much the company paid a dividend every year to a price per share, (b) Firm Sizeexpresses as size of assets be measured by log tma natural of assets total, (c) Insider Ownership is the number of shareholders, directors or executive officers of the company has a significant proportion of the company's shares, and (d) Growth opportunities describes the growth of corporate investment be measured from asset growth from year to year. Intervening variable is a proxy for agency costs measured as asset utilization ratio that describes the productivity achieved by management in acquiring the company's sales. The more effective use of the asset management company to achieve annual sales will be getting a bit of extra costs incurred for monitoring and controling (Lumbantobing, 2008). And as Dependent variable is debt ratiomeasured asdebt to assets that describesthe ratio of total debt to assets total.

Data Analysis Techniques

Modeling in this study using multiple linear regression analysis and path analysis. The structural equation models as follows:

Structural equation 1: Agency cost model

$AC = \alpha_1 GO + \alpha_2 SIZE + \alpha_3 IO + \alpha_4 DIV + \alpha_5 D_1 + \alpha_{15} GO.D_1 + \alpha_{25} SIZE.D1 + \alpha_{35} IO.D1 + \alpha_{45} DIV.D1 + \varepsilon_1$

which AC= agency cost; GO= growth opportunity; SIZE= size of assets, IO= insider ownership; DIV= Dividen; D_1= Dummy for industry (D1 = 1 manufacturing, and D1 = 0 non-manufacturing)

Structural equation 2: Debt ratio model

$LEV = \beta_1 GO + \beta_2 SIZE + \beta_3 IO + \beta_4 DIV + \beta_5 AC + \beta_6 D_1 + \beta_{16} GO.D_1 + \beta_{26} SIZE.D_1 + \beta_{36} IO.D_1 + \beta_{46} DIV.D_1 + \beta_{56} AC.D_1 + \varepsilon_2$ which LEV symbol forleverage or debt ratio

To analyze direct and indirect effects of determinants of capital structure toward debt ratio through intervening variable, expressed by path analysis as below:

$AC = \delta_1 GO + \delta_2 SIZE + \delta_3 IO + \delta_4 DIV + \varepsilon_1$ and $LEV = \gamma_1 GO + \gamma_2 SIZE + \gamma_3 IO + \gamma_4 DIV + \gamma_5 AC + \varepsilon_2$

EFFECT	GO→AC→LEV	SIZE→AC→LEV	IO→AC→LEV	DIV→AC→LEV
Direct	γ_1	γ_2	γ_3	γ_4
Indirect	$\delta_1 \gamma_5$	$\delta_2 \gamma_5$	$\delta_3 \gamma_5$	$\delta_4 \gamma_5$
Total	$\gamma_1 + \delta_1 \gamma_5$	$\gamma_2 + \delta_2 \gamma_5$	$\gamma_3 + \delta_3 \gamma_5$	$\gamma_4 + \delta_4 \gamma_5$

Data Analysis

Based on regression output of SPSS 20 statistical software package were used to analyze the data showed the results as below:

Estimateequation model 1 (agency cost) based on industry different:

$AC = -0{,}071GO - 0{,}088SIZE + 0{,}138IO - 0{,}037DIV + 0{,}130D_1^{**} - 0{,}316GO.D_1 - 0{,}095SIZE.D1 - 0{,}128IO.D1 - 0{,}092DIV.D1$

Estimate equation model 2 (leverage) based on industry different:

$LEV = -0{,}041GO - 0{,}111SIZE - 0{,}385IO + 0{,}006DIV + 0{,}308AC - 0{,}027D_1 - 0{,}161GO.D_1 + 0{,}263SIZE.D_1 + 0{,}434IO.D_1 + 0{,}111DIV.D_1 + 0{,}294AC.D_1$

The effect of Growth Opportunity, Firm Size, Insider Ownership, and Dividendto Leverage which mediated by Agency Cost:

EFFECT	GO – LEV	SIZE – LEV	IO- LEV	DIV- LEV
Direct	-0,209**	0,068	-0,008**	0,080
Indirect	-0,2054	-0,07384	0,026	-0,04212
Total	-0,4144	-0,00584	0,018	0,03788

Note: **) significant at alpha level 0,05

Discussion of Results

Growth Opportunity

The results of model estimation equation agency cost shown that growth opportunities significantly negative effect on the debt ratio. These results provided evidence supporting the results of a study Fatmasari (2011) and Mao (2003),

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which revealed a negative influence the growth opportunities toward debt ratios, where a company with high growth opportunities tends to use lower debt ratios.

Firm Size

The test showed that firm size has significantly negative effect on AUR, thus the larger firm size, agency cost is increasing. This result provided evidence supporting the findings of Canback (2006) and Lumbantobing (2008), which revealed that agency cost increases with firm size. While testing the model estimation showed that the debt ratio of the firm size was not significant positive effect on the debt ratio. These results did not support the findings of Lumbantobing (2008) and Homaifar *et al* (1994) which stated that the large companies that have the ability to return the debt to earn the trust of creditors to issue debt in large quantities, so the larger firm size of the company, debt capacity obtained more increasing. Not enough evidence to show that companies in Indonesia which have a large firm size will use debt as an alternative funding.

Dividend

The results of this study showed dividends were not significantly affect to agency cost that has implications not enough to confirm the opinion of Jensen and Meckling (1976), Rozeff (1982), and Easterbook (1984) which stated that the dividend be used to reduce the agency conflict between managers and shareholders. The results of this study also demonstrated that dividends has significantly positive effect on the debt ratio. These findings confirmed the results of the study Lumbantobing (2008) which mentioned positive influence on the dividend policy where the debt ratio higher, retained earnings that are used for the payment of dividends, while corporate investment remains financed by debt. Another possibility retained earnings were used for the payment of dividends, while additional debt for monitoring costs in an attempt to discipline the managers.

Insider Ownership

The results of this test has not been enough evidence showing that the administration shares the manager will increase agency conflicts which then increases the agency cost. Results of testing the model equations debt ratio also showed that insider ownership has no significantly affect to the debt ratio. These findings did not enough provide evidence supporting the argument of Jensen and Meckling (1976) who argued that greater insider ownership then the difference between the interests of shareholders with the company managers would be lower. The results of this study also did not support the findings of Chen & Strange (2005), and Lumbantobing (2015) which revealed that insider ownership has a positive relationship with the debt ratio, which impact the efficiency of the debt ratio positive effect on share ownership managerial.

Agency Cost

Results of testing debt ratio model in this study showed that AUR significant positively effect on debt ratio. In other words, the agency charges a significant negative effect on the debt ratio. These findings were consistent to the results of studies Jensen (1989) and Lumbantobing (2008), which revealed that the influence of asymmetric information tends to push the pecking order behavior so companies are profitable and face agency costs tend to use retained earnings as a first priority funding, reducing the ratio of corporate debt. These findings explained indication of companies in Indonesia with high agency costs using high debt in an effort to reduce its agency conflict (as disclosed Damodaran, 2001).

Testing the mediating effect the agency cost on influence of determinants of capital structure to debt ratio.

Based on the above table indicated that the agency costs significantly mediate the positive effect of the growth opportunities to debt ratio. The positive effects on the growth opportunities, the company debt ratio will be positive when the company's agency cost increases. These findings supported the study of Jensen (1986), and Wahyudi (2005) which stated that companies with high growth rate of investment opportunities tend to use external funding sources in form of high debt. Spending these assets can lead agency costs on companies, where managers can behave wasteful to invest available cash. As for the indirect effect of firm size and dividend on the ratio of debt through the agency cost indicated that the agency cost was not significantly mediate the effect of firm size and the ratio of dividends to the company's debt ratios. For insider ownership variables, the results indicated that the agency cost significantly mediates the negative effect of insider ownership to debt ratio of the company. The increase in insider ownership will reduce the agency conflict in which lower differences of interest between shareholders and managers. The managers will act more cautiously in making decisions, including the use of debt.

Dummy

The test results estimation equation model of agency cost showed a significant effect on agency cost manufacturing than non-manufacturing companies. However, there was not enough evidence of differences in the effect of firm size, insider ownership and dividends to the agency cost between manufacturing and non-manufacturing sectors. As for the variables of growth opportunities, there are significant differences in growth opportunities to influence agency costs at

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manufacturing and non-manufacturing sectors. This shows the effect of growth opportunities on agency cost in non-manufacturing sector was higher than the manufacturing sector. Testing models debt ratio by industry showed there was not enough evidence to debt ratio differences between manufacturing and non-manufacturing. But there were significant differences in the effect of agency costs between manufacturing and non-manufacturing against the debt ratio. These findings suggested the influence of agency cost to the debt ratio on manufacturing sector was higher than the company's non-manufacturing sector.

Conclusions

These results indicated opportunities for growth and firm size significantly positive effect on the agency cost, while insider ownership and dividends were not significantly affect to the agency cost.

The results demonstrated the growth opportunities and agency costs significant negatively effect on the debt ratio, while the dividend significant positively effect toward the debt ratio. However, these findings have not been sufficient evidence showed that companies with firm size and a high proportion of insider ownership would have a high debt ratio as well.

The results indicated that the agency costs significantly mediate the direct effect of growth opportunities, firm size, insider ownership and dividend toward the debt ratio. With the indirect relationship through the agency cost is low, the increase in growth opportunity, firm size, the dividend will reduce the ratio of corporate debt. While the influence of insider ownership will improve the ratio of corporate debt.

The results showed differences in the effect of agency costs for differences debt ratios manufacturing company with a non-manufacturing company. Agency costs more significant effect on the debt ratio of manufacturing sector than non-manufacturing sector. Effect of growth opportunities on agency cost non-manufacturing companies was greater than the cost of agency manufacturing companies. However, this study has not been enough research evidence indicates a significant difference corporate debt ratio of both sectors industrial companies.

Recommendations

These results revealed that the positive effects of firm size on the debt ratio will be negative when agency costs increase, so does the findings that show the negative effects of growth opportunities and dividend against the debt ratio will be negative when the agency cost decreases; the recommendations can be given to the study this is for large companies manufacturing and non-manufacturing that want to lower the ratio of debt need to reduce their agency costs when the conditions of the companies gained high growth opportunities. Thus, maximization the value of the company through optimization of excellent capital structure based on the agency theory can be realized.

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