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# Determinants of Dividend Policy and Capital Structure of State-Owned Companies and Non-State-Owned Companies

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#### ABSTRACT

The purpose of this study was to first analyse the effect of agency costs and investment on dividend policy of state-owned and non-state-owned companies and second, to examine the effect of agency costs, dividend policy and investment on the capital structure of these companies. A total of 40 companies divided equally between state-owned and 20 non state-owned companies, were surveyed The Partial Least Square was used to test the hypotheses. Results showed agency cost had an effect on dividend policy of non-state-owned companies. It did not have any effect on the capital structure of both types of companies. In terms of investment, agency cost did have an effect on the capital structure of both types of companies.

Keywords: Agency costs, capital structure, dividend policy, investment

#### **INTRODUCTION**

Capital is vital for companies to carry out their operational activities. Adequate

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*E-mail addresses:* enni.savitri@lecturer.unri.ac.id (Enni Savitri) tatangag@unej.ac.id (Tatang Ary Gumanti) kirmizi.ritonga@lecturer.unri.ac.id (Kirmizi Ritonga) \* Corresponding author funding is important to manage the needs of the company, and the amount of capital can be either beneficial or damaging to the company including state-owned companies (SOCs). The SOCs play a strategic role as the country's pillar along with privately owned companies in achieving sustainable economic growth. The SOCs are bound by government regulations and hence, their decisions must be strategic, especially in funding and spending. The SOCs also generate income for the state which contributes to the government's budget. Capital structure must allow the companies to remain competitive. Yet, unlike private companies, the SOCs have less flexibility in acquiring external funding as approval from government is required. Sources of funding are critical as it could affect the companies' future performance. The goal of capital structure is to create a permanent funding source with an optimal mix of debt and equity in order to maximise the value of the company.

The Indonesian SOCs have different capital structure that can be seen from their debt policy (Constitutional Court Decision No. 77/PUU-IX/2011 dated September 17, 2012). The SOC has separate wealth from the wealth of the state, so that the SOCs' debt settlement is subject to the Limited Liability Company Act No. 40 of 2007. The SOCs' debt is legally not a public sector debt. The government has substantial power in the management of SOCs. Compared with non-state-owned companies (Non-SOCs), SOCs' profit is only one-fourth of the latter. Lower profits mean lower dividends. This also translates into less financing for their business. As a consequence, the SOCs would not always be able to exploit competitive investment opportunities.

In addition to that, the SOCs face different agency problems. The top-level management of SOCs are not free from political interest. This has made them dependent on the interest of ruling parties. Most strategic decisions are not free from political intervention either.

Therefore, we see the difference in capital structure, agency costs, and management of investments between SOCs and Non-SOCs. Thus, the purpose of this study is to examine the determinants of capital structure between state-owned and non-state-owned companies listed in the Indonesian stock exchange. Results indicate that only non-state-owned companies have a dividend policy which is determined by agency cost. The capital structure is not affected by agency cost both for SOCs and Non-SOCs. Capital structure is affected by the investment opportunity both on the SOCs and Non-SOCs.

The next section of this paper discusses major works related to this topic and its hypotheses. This is followed by research methods and a discussion of the paper's findings. The last section summarises and concludes the paper.

#### LITERATURE REVIEW

## The Effect of Agency Costs on Dividend Policy and Capital Structure

Agency problem arises when managers who have superior information act as an agent for the owner. This conflict allows the managers to exploit resources or take over other businesses (Miller & Breton, 2006). Financial decisions, investment decisions and the value of the company are strongly influenced by the conflict between the investors (shareholders) and the managers that leads to agency costs. Jensen (1986) argued that the agency costs emerge from the imbalance of interests of principals and managers of the company. The principals have to bear the costs to ascertain that the managers are acting in their best interest.

Agency problem arises between managers and shareholders. Heightening collateralisable assets will reduce the conflict between the shareholders enabling companies to pay substantial amount of dividends. Lower collateralisable assets will increase the conflict between shareholders of the company which in turn prevent payment of dividends. Wahyudi and Baidori (2008) revealed the higher the collateralisable assets, the higher the level of protection of creditors who receive their debt repayment. This will reduce agency cost between the shareholders and the debtholders. Thus, it can be said that there is a relationship between cost of agency and the dividend policy.

Deshmukh (2005) reported findings which are consistent with Jensen's Free Cash Flow Hypothesis, in which insider ownership negatively affects dividend payments. The higher the agency costs, the lower the dividend pay-out. Deshmukh found asymmetric information described as the opposite of equity issuance cost has a positive effect on dividend pay-out. The effect of asymmetric information on dividend policy is based on pecking order theory.

As the company investment scales increase, given the increase of its debt, it encourages shareholders to substitute assets by reducing dividend payments on retained earnings (Mao, 2003). Conversely, when the company faces over-investment conditions due to excessive free cash flow, retained earnings are used to increase dividend payouts. This reduces conflict between manager and shareholder when the problem of free cash flow arises. The company may do it by improving dividend payment mechanism (to shift risk).

Darrough and Stoughton (1986) explain that agency problems occur because of asymmetric information between owners and managers, namely when one party has information that is not owned by the other. This can trigger a moral hazard behaviour of managers. In addition, it would also increase the expenses related to investments (overinvestment) when free cash flow emerges. These expenses can reduce shareholder value. Chung, Firth and Kim (2005) found one of the implications of free cash flow agency problem is that the company's financial performance will deteriorate and may affect stock market valuation. To mitigate this agency problem, shareholders can restrict the activities of distorted agents through the provision of appropriate incentives, such as through increased ownership by management (Jensen & Meckling, 1976), and suggest the importance of funding through debt in addition to monitoring the activities that deviate from management. Debt financing has the potential to reduce agency conflicts, as management has an obligation to pay the principal loan and its interest. Therefore, the free cash flow of the companies can be used for debt repayment. Thus, the manager will use the debt optimally. Akhtar (2005); Lehn and Poulsen (1989) and use free cash flow proxies to measure agency costs,

showing a positive influence on leverage. However, Myers (1984) discloses that the influence of asymmetric information tends to encourage pecking order behaviour so that firms that are profitable and face high agency costs tend to use retained earnings as the top priority of funding. This leads to a decrease in corporate leverage. Likewise, Deshmukh (2005); Jensen and Meckling (1976); Moh'd, Perry and Rimbey (1998); Panno (2003), Vera, Tobing and Ibad (2005) and argue that if agency costs are high, their debt ratio will decrease. Chen and Strange (2006); Jensen, Solberg and Zorn (1992), Moh'd et al. (1998) and show that the ownership of shares by management has a negative relationship with the use of debt. This means that agency costs are negatively related to the company's debt policy.

Based on the above, the following two hypotheses are proposed:

- H<sub>1</sub> = Agency costs influences dividend policy of SOCs and Non-SOCs.
- $H_2$  = Agency costs influences capital structure of SOCs and Non-SOCs.

# The Effect of Dividend Policy on the Capital Structure

Dividend policy is influenced by (1) investment opportunities, (2) a mixture of capital structure, and (3) the availability of internal funds (Keown, Martin, Petty, & Scott, 2010). The policy also depends on the availability of profits within the company. Unlike in most western countries where dividend level is under the Chief Executive's hand, in Indonesia the amount of dividend is determined at the general meeting of shareholders. Thus, the agency cost inherent in the dividend decision is lowered in the case of Indonesia companies.

High use of leverage will cause the companies to reduce their dividend payment, because debtholders demand the management of the companies to satisfy them, instead of the shareholders. Thus, the dividend policy is negatively related with the companies' leverage. Other things held constant, the increase in the companies' debt level will be followed by the decrease in the companies' dividend and vice versa.

Dividend policy raises the issues concerning the use of profits with the rights of shareholders. Basically, the profits can be shared as dividends or retained to be reinvested. The dividend will reduce the company's net capital and to maintain an optimal capital structure, the company needs to issue lower securities risk, which is debt (Frank & Goyal, 2003).

Barclay, Smith and Watts (1998) argued that the determination of funding and dividend policy is inseparable from the company's free cash flow problem. Companies with high growth opportunities may experience difficulty in their free cash flow to pay dividends, because they do not use external sources. Retained earnings as a source of internal funding are mostly allocated to fund investment projects. Chen and Strange (2006); Jensen, Solberg and Zorn (1992); Ojah and Manrique (2005) provided empirical evidence that dividend

policy negatively affects leverage. Their findings support the agency cost theory. High retained earnings are used to increase dividend payments and pay off corporate debt. Although it seems to be inconsistent with agency theory, Tong and Green (2005), on the other hand, showed evidence that dividend policy positively affects leverage. High retained earnings are used for dividend payments, while corporate investment is financed from debt. Another possibility is retained earnings is used for dividend payments, while debt is added to monitoring costs in an attempt to discipline the manager. The findings of Tong and Green (2005) are consistent with Deshmukh (2005); Gaver and Gaver (1993); Smith and Watt (1992) who revealed that dividend payments positively affect the companies' debt ratio. Large companies with high debt ratios will be able to pay higher dividends. A large dividend pay-out in the past will increase cash requirements and encourage greater lending. Conversely, the more profitable a company is, the greater the retained earnings portion to pay off the debt. So, the paid residual dividend becomes less. Thus, according to pecking order theory, there is a positive correlation between dividends with debt ratios (Bhaduri, 2002; Tong & Green, 2005).

Based on these arguments, the following hypothesis is proposed:

H<sub>3</sub> = dividend policy influences the capital structure of the state-owned companies and non-state-owned companies.

## The Influence of Investment on Dividend Policy and Capital Structure

Companies with high growth opportunities would tend to require larger funding to finance growth in the future. Therefore, the companies will maintain their earnings to be reinvested in the companies and at the same time the companies are expected to continue to rely on funding through greater debt (Booth, Aivazian, demirguc-Kunt, & Maksimovic, 2001). Additionally, Loopies (2008) examines the effect of leverage on the investment company and concludes that the negative effect of leverage on investment will be much stronger for firms with low growth opportunities.

Brigham and Gapenski (1996) state that any change in the dividend pay-out policy will have two opposing effects. If the dividends are paid-off, the interests of the backup will be ignored. Conversely, if all of the earnings are withheld, the interests of shareholders for cash will be neglected. The dividend distribution is largely influenced by the behaviour of investors who prefer higher dividends, which leads to lowering of retained earnings.

High-growth companies require more funds for investment implementation. Based on the pecking order theory, funding needs are prioritised on internal fund sources such as retained earnings. Since most of the profits are allocated to the need for investment funds, the dividends pay-out is reduced. Barclay, Smith and Watts (1998) argued that the determination of funding and dividend policy is inseparable from the companies' free cash flow problems.

Companies with high growth opportunities are likely to experience difficult cash flow, thus facing difficulties to pay dividends, because companies do not access external funding sources. Retained earnings as a source of internal funding are mostly allocated to fund investment projects. It can be seen investment opportunities have a negative effect on dividend payments. The opinion of Barclay et al. (1998) is supported by empirical evidence of Pawlina and Renneboog (2005) who found that investment decisions negatively affect dividend pay-outs. Fama and French (2002) also found that non-paying dividend companies generally have larger investment projects.

Pecking order theory holds that debt generally increases when investment exceeds retained earnings, and vice versa (Fama & French, 2000). However, Myers (1984) argued that firms are more concerned with balancing current and future financing costs, so firms with high investment opportunities will keep their debt capacity low to avoid investing in riskier new shares emission. This balance of financing costs encourages companies with large investment opportunities to tend to have high debt ratios. Mao (2003) also revealed that the increase in investment scale will increase the volatility of the company's cash flow, and this will encourage shareholder risk-shifting to increase investment funding through debt as

long as the debt risk remains lower than the risk of emission of new shares. It means that when the retained earnings are not sufficient, the scale of investment will increase the need for funds to be financed by debt. In other words, investment has a positive effect on the company's debt ratio. Mao (2003) explained that when the company increases its debt to finance its investment, the marginal volatility of investment will increase to the marginal cost point of the debt agency, equal to the marginal cost of the equity agency. This shows the leverage level of the company has a positive effect on the company's investment. Fama and French (2002) suggested that firms with large investments tend to have high debt ratios. However, Hennessy and Whited (2005) revealed otherwise.

Based on these descriptions, two hypotheses are formulated:

- $H_4$  = Investment influences the dividend policy of SOCs and Non-SOCs.
- $H_5$  = Investment influences the capital structure of SOCs and Non-SOCs.

#### **METHODS**

#### **Sample and Data Sources**

There are 20 SOCs and 20 Non-SOCs which met the selection criteria, such as the companies were engaged engaging in the pharmaceutical, energy, industrial metals, construction, banking, mining, cement, transportation and infrastructure, transportation and telecommunications. The research data in the form of financial statements were obtained by accessing Indonesia Stock Exchange official website from 2009 to 2013.

#### **Measurement of Variable**

Table 1 contains the summary of variable measurement used in the study. The study used Partial Least Square (PLS) with the application of Smart PLS.

Table 1	
Measurement of variables	

Variables	Indicator(s)	Measurement	
Capital structure	Leverage (LEV)	Total debt divided by total assets	
Investment	Profitability (PROF)	Profit before tax divided by total assets	
	Growth	Total of present assets reduced total assets of the previous period and the next period divided by total assets.	
	Size	Ln total assets	
	Risk (ROA)	Net income / total assets	
Agency costs	Asset Utilization Ratio (AUR)	Sales divided by total assets	
	Free Cash Flow (FCF)	Net cash flow from operating activities minus purchases of fixed assets divided by total assets	
	Dispersion Ownership (DO)	The percentage of shares held by an institution	
	Concentrated Ownership (CO)	The percentage of shares owned by the public	

#### RESULTS

#### **Descriptive Statistics**

Table 2 provides the summary of descriptive statistics of all variables examined in the study. It can be seen that only two variables are found to have significant differences between the SOCs and Non-SOCs, namely the ratio of sales over total assets (AUR) and the percentage of shares held by the institution (DO).

Variables		SOC	NON-SOC		The mean
	Average	Standard Deviation	Average	Standard Deviation	difference
ROA	8.248	8.276	7.861	7.332	0.387
PROF	0.109	0.099	0.102	0.093	0.007
GROWTH	0.149	0.063	0.073	0.297	0.076
LEV	0.572	0.243	0.605	0.444	-0.033
SIZE	30.562	1.805	30.551	1.453	0.011
AUR	0.810	0.488	0.526	0.450	0.284*
DO	67.347	10.539	57.015	22.931	10.332*
CO	31.326	9.660	35.294	21.327	-3.968
DIV	25.076	18.954	20.348	21.078	4.728
FCF	0.060	0.056	0.004	0.224	0.056

Table 2
$Descriptive\ statistic\ of\ variables$

\*, \*\*, \*\*\* denote significant level at 10%, 5%, 1%, respectively. Significance level was based on an independent sample t-test for mean difference

*Note:* SOC is State Owned Companies, ROA is Net income divided by total assets, PROF is profit before tax divided by total assets, GROWTH is total assets of the now reduced total assets of the previous period and the next period divided by total assets, LEV is total debt divided by total assets, Size is natural logarithm of total assets, AUR is sales divided by total assets, DO is the percentage of shares held by the institution, CO is the percentage of shares owned by the public, DIV is dividend policy, and FCF is net cash flow from operating activities minus purchases of fixed assets divided by total assets

#### **Direct Effect**

Table 3 contains the results of test on direct effect of the examined variables. The results can be described as follows.

- The influence of the agency cost of the SOCs on the dividend is not significant (p=0.108). The opposite result is shown for Non-SOCs, where the proxy for agency cost proxy significantly affects dividend policy (p=0.003).
- Agency costs of the SOCs do not have influence on the leverage (p=0.126). Similar result is noted for Non-SOCs.
- Dividend policy does not have significant effect on the leverage of the SOCs (p=0.879). This means that proposed hypothesis is rejected. Similar evidence is also noted for Non- SOCs (p= 0.685).
- The SOCs' investment has significant effect on the dividend policy (p=0.001). The opposite result is shown for Non-SOCs (p= 0.413).
- The investment of the SOCs has significant influence on the leverage (p=0.000). Similar finding is reported for Non-SOCs.

Table 3Test of direct effect

Relationship of	<i>p</i> -Value of Direct Effect			
Variables	State- owned companies	Non-state- owned companies		
Agency cost $\rightarrow$ Dividend	0.108	0.003		
Agency cost → Leverage	0.126	0.663		
$Dividend \rightarrow Leverage$	0.879	0.685		
Investment → Dividend	0.001	0.413		
Investment → Leverage	0.000	0.000		

Table 4Results of test on indirect effect

Relationship of	<i>p</i> -Value of Indirect Effect			
Variables	State- owned companies	Non-state- owned companies		
Agency cost → Leverage	0.879	0.674		
Investment → Leverage	0.885	0.834		

# Indirect Effect

Table 4 shows the results of tests on the indirect effect of variables which can be summarised as follows:

- The SOCs agency costs do not have significant effect on the leverage (p= 0.879). Similar finding is reported for Non-SOCs (p=0.674). This means that the hypothesis is rejected for both types of companies.
- The investment level does not have significant effect on the leverage of the SOCs (p= 0.885) and also for Non-SOCs (p=0.834). This means that the hypothesis is rejected for both types of companies.

#### DISCUSSION

According to the pecking order theory, high dividend payments will increase demand for cash and when the company's profit is not adequate to meet dividend pay-outs, the funds for payment of dividends would be earned from issuing debt. In order to finance this, and the cost of external monitoring, the company may increase the use of debt management. Thus, the findings of the agency theory assumption are applied only to Non-SOCs that to solve agency problems through debt instruments, preferred shareholders of a company that has a low dividend pay-out ratio can maximise the value of the company. These indicate the control mechanisms of the non-stateowned companies in Indonesia through the company's dividend policy would effectively lower debt agency conflict. There is also evidence that the dividend policy is a substitution for a policy of debt in the capital structure of corporate Non-SOCs.

It is also suggested that investment can leverage on SOCs and Non-SOCs. The two types of companies pay more attention to offset the cost of funding (financing costs) at the present and future so the companies with high investment opportunities will retain debt risks to remain low to avoid emission of new shares funded by more risky investments. The balance of the cost of this funding encourages companies with great investment opportunities to have high debt ratio. Mao (2003) revealed that the increase in the scale of investment will increase the company's cash flow volatility. This will encourage risk-shifting shareholders to increase investment funding through debt to make debt risk lower than the risk of new shares. This means that when the retained earnings as a source of internal financing is no longer sufficient, investment scale will increase the need for investment funds which will be financed by debt. In other words, there is a positive effect on the investment of the firm's debt ratio.

Additional analysis on whether the extent of dividend policy is different between the SOCs and Non-SOCs show that the former have significantly lower payout ratio compared with the latter (28.42 vs 40.29, t=2.596, p<0.10). Thus, there is lower profitability of SOCs compared with Non-SOCs. Findings also show that the level of SOCs' leverage is statistically higher compared with Non-SOCs (58.55 vs 47.83, t=2.736, p<0.05). Thus, SOCs on average have higher debt ratio than Non-SOCs. Comparing the extent of dividend pay-out ratio and the leverage of these two types of companies, it is clear that SOCs have higher leverage level and pay less dividend. Non-SOCs have lower leverage and pay more dividend. Thus, the Non-SOCs are less risky (as they have lower leverage) and are more profitable.

#### CONCLUSION

This study analyses the structural models of SOCs and Non-SOCs. It concludes that the agency costs only affect the Non-SOCs dividend policy, and do not affect the capital structure of both of the SOCs and Non-SOCs. Dividend policy does not have any effect on the capital structure of both types of companies. In addition, investments have an effect on dividend policy only on the SOCs. The amount of investments affects the level of capital structure both for SOCs and Non-SOCs. On average, SOCs have higher leverage level and lower dividend pay-out than Non-SOCs.

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