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ANALYSIS OF FACTORS AFFECTING AGENCY COST OF MANUFACTURING COMPANIES LISTED ON INDONESIA STOCK EXCHANGE

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The purpose of this research was to examine the impact of ownership structure, dividend policy, firm size, and capital structure on agency cost. The sample that was used in this research consisted of 32 manufacturing companies listed on Indonesia Stock Exchange in 2010 and 2011. This study used simple linear regression analysis to test the data. Using the convidence interval of 95%, statistical results show that the insider ownership and the capital structure have significant and negative impact on the agency cost. On the other hand, it is found that the institutional ownership has significantly positive impact on the agency cost. However, researcher found no evidence that the dividend policy and firm size have significant impact on the agency cost. These results could be considered as one of the criteria to create proper corporate governance for firms' management as well as investment criteria for investors.

Keywords: agency cost, capital structure, dividend policy, firm size, insider ownership, institutional ownership

INTRODUCTION

According to the agency theory, as a firm is getting bigger, it is also getting harder for the owners to govern the firm. In this situation, the owners would appoint managers to replace them in governing the firm. The owners would give right to the managers to act as decision makers for the firm on their behalf. This would create a separation of ownership and control inside the firm (Jensen & Meckling, 1976).

The separation of ownership and control could lead to an agency problem. An agency problem usually happens when one or more parties (principals) delegate their work to other parties (agents) (Naiker, Navissi, & Sridharan, 2008). The responsibility of the managers is to make sure that the firm is able to achieve its main objective, which is maximizing the wealth of its shareholders. However, in many occasions the managers tend to make decisions for their own interests instead of the shareholders' interests (manager expropriation). This particularly happens whenever there is information which is only known by the managers relative to the owners (asymmetric information). The inability to unify the interests of each party would create a conflict which is called agency conflict or agency problem.

Agency problem might result in agency cost. Agency cost could be described as the misused of a firm's assets by the manager for ineffective and unnecessary activities (Fachrudin, 2011). Fachrudin also defined agency cost as the assets that are used by the principals as incentives for the agents, or used for monitoring the agents in order to prevent hazards. Agency costs could lead to the correction of share price of the firms and reduce the firm values as well as shareholders wealth.

Fachrudin (2011) separated agency cost in some forms; which are incentives or bonuses given to the managers, monitoring cost, bonding cost, residual loss, and missused spending of free cash flow by the managers. Firms with large amount of free cash flow are expected to give the free cash flow to the shareholders as dividend. This should be done to prevent the use of the free cash flow for useless activities or unprofitable investment by the managers.

Agency cost may not be eliminated, however it could be minimized. There are some factors and mechanisms that can be used to minimize the amount of agency cost. For example, ownership structure can determine the amount of agency cost (Ang, Rebel, & Lin 2000; Gul, Sajid, Razzaq, & Afzal, 2012). Firm size and capital structure can also determine the amount of agency cost (Fachrudin, 2011). Byrd (2010) also suggested that another determinant of agency cost is dividend policy.

This research aims to examine the impact of several factors mentioned above on the amount of agency cost. Research on this topic have usually been done outside Indonesia especially in developed countries, and many of them used small-unlisted firms or family businesses as the objects (e.g., Ang et al., 2000; Gul et al. 2012; McKnight & Wheir, 2008; Mohammed, 2013). There are only a few numbers of research on this topic that have been done in developing countries, particularly in Indonesia. In addition, conflicting results were found on previous research that makes this research worth to be done. Within this research, the researcher statistically tested the impact of some factors, such as ownership structure, firm size, capital structure, and dividend policy toward agency cost.

THEORETICAL FRAMEWORK

This section discusses the theories that were used to develop this study. First, it discusses agency theory and agency conflict that can result in agency cost. Then it discusses agency cost. Finally, this section discusses several factors that could affect agency cost.

Agency Theory. Agency theory was popularized by Jensen and Meckling in 1976. This theory describes the relationship between the owner (principal) and the manager (agent). The main objective of a firm is to maximize the wealth of its owner. In the progress, the owner would meet some limitations in governing the firm in order to achieve its objective. To overcome those limitations, the owner would hire managers (agents) to help manage the organization. At this point, the owners (shareholders) and managers would build a relationship that can be translated into the delegation of authority from shareholders to managers to make decision and action within the firm on behalf of the shareholders (Imanta & Satwiko, 2011).

The agency theory assumes that all parties within a firm act according to their best interests which can cause a conflict of interest that is called agency problem. Agency problem basically arises from the separation of control and ownership between managers and shareholders within the firm (Jensen & Meckling, 1976). The shareholders are assumed only to be interested in a huge return for their investment as fast as possible; one way is through dividend. On the other hand, managers are motivated on receiving incentives or bonuses as much as possible for their work (Imanta & Satwiko, 2011). From the agency problem, a concept called corporate governance emerges; this describes the mechanism of how a firm should be governed. The corporate governance concept may help to direct how managers should be accountable to shareholders (Margaretha & Asmariani, 2009).

Agency Cost. The divergence in interest between the principals and agents would harm the welfare of shareholders

(Jensen & Meckling, 1976). The amount of money equal to the reduction of shareholders welfare is referred to as residual loss. When there is a conflict of interest between the principal and agent, the principal could limit the divergences between both parties in some ways. The shareholders, as the principal, may establish appropriate incentives for the agent or incurring monitoring costs to limit the managers' decision. In addition, the shareholders may expend some resources for the managers to guarantee that their action would not harm the shareholders' welfare. All the residual and the costs spent to prevent the managers from missusing the company's assets are referred to as agency cost. Most probably, these costs could not be avoided. The avoidance of these costs might result in the value of the firm being lower than otherwise it should be.

Ownership Structure and Agency Cost. One aspect that affects the amount of agency cost is the ownership structure within the firms. The agency cost increases when the ownership of a single owned-manager of the firm is less than 100% (Jensen & Meckling, 1976). Based on this idea, the situation of a no-agency cost can only occur when there is only one owner who acts as the manager in governing the firm; therefore, this would not work in public owned companies.

According to the agency theory, Ang et al. (2000) concluded that the percentage of insider ownership within the firm could affect the amount of agency cost. If the agents have large amount of ownership in the firm, the agency problem is not likely to happen, and the agency cost can be reduced. This can be shown in small-unlisted and family businesses where the owners usually act as the managers in the firms. In this case, the amount of agency costs is usually lower.

Some parts of the firms' capital are usually owned by other institutions. Institutional shareholders usually have large amount of firms' ownership. Most of the time they play a key role in reducing the amount of agency cost (Gul et al., 2012). Nekounam, Hossini, and Ahmadi (2013) showed that institutional ownership and agency cost have a positive relationship. This means that the increase of institutional ownership would also increase the amount of agency cost. This can be possible because institutional shareholders would monitor the action of managers and influence the managerial decision making. Compared to public shareholders, institutional shareholders can monitor the managerial actions at lower cost because they have more resources and expertise. Thus, the hypothesis would be:

H_1: Insider ownership has impact on agency cost.

H_2: Institutional ownership has impact on agency cost.

Dividend Policy and Agency Cost. Dividend is one mechanism that can be used to minimize agency cost. High dividend payment can also reduce the conflict between managers and shareholders. According to Mollah, Rafiqul, and Sharp (2007) dividend payment reduces agency cost because it becomes a part of firms monitoring and bonding activities. The payment of dividend would also reduce the amount of available assets that could be used by the manager for unnecessary investment or spending. Byrd (2010) found that high dividend policy tend to result in lower agency cost. Nevertheless, Widana Putra and Ratnadi (2008) found no evidence that dividend policy could affect agency cost. With dividend payment, a firm will give the available free cash flow to the shareholders and, at the same time, prevent the misuse of free cash flow by the managers. The hypothesis would be:

H_3: Dividend policy has impact on agency cost.

Firm Size and Agency Cost. Firm size also has an impact on agency cost. Fachrudin (2011) suggested that larger firms usually operate more efficiently; therefore, they have less agency cost

compared to smaller business entities. Compared to smaller firms, larger firm need less discretionary expense to operate. Discretionary expense is one indicator of agency cost. Large companies also have a better mechanism of good corporate governance to prevent managers to take unnecessary decision that can harm the shareholders' welfare. Therefore, the hypothesis would be:

H_4: Firm size has impact on agency cost.

Capital Structure and Agency Cost. Another way to reduce the amount of agency cost is by using debt. Debt can be used as a tool to discipline managers (Mohammed, 2013). The availability of debt will result in interest expense and reduce the amount of free cash flow that can be used for managerial decision. Managers would be carefully making their decision to make sure that the firm will be able to pay the debt and its interests. In this situation, creditors would also monitor the decision made by the managers to make sure that their credit and interest can be paid. Below is the hypothesis:

H_5: Capital structure has impact on agency cost.

RESEARCH METHOD

Research Design. This research used a causal design that determines the cause and effect relationship between two or more objects. A causal study is used because the purpose of this research is to investigate the effect of independent variables (i.e. insider ownership, institutional ownership, dividend policy, firm size, and capital structure) on the dependent variable (i.e. agency cost) in the manufacturing companies listed on IDX from 2010 to 2011. This research used statistical technique to analyze those variables in order to test the hypotheses.

Population and Sample. The population of this research is manufacturing companies listed on IDX from 2010 to 2011. Meanwhile, the sample of this research is chosen through purposive sampling technique where all of the criteria must be fulfilled in order to avoid any bias. The criteria in the sampling are: (1) the sample companies are manufacturing companies consistently listed on IDX and published their annual reports in 2010 to 2011, (2) disclosed the information about insider ownership and institutional ownership in the annual reports, (3) paid dividend regularly, (4) fiscal year ended on December 31. Finally, the sampling criteria were met by only 32 companies, therefore, there are 64 firm-year observations used in this research.

Data Collection. The data collection process began by finding out the data that is needed in this study and the source of the data, followed by downloading the data in the annual report of the manufacturing companies from IDX website for the period of 2010 to 2011. The annual reports were being reviewed to see if the annual report contains the data that is needed, and checked if the data meet the given criteria. Data that have passed the review phase and met the given criteria were tabulated and analyzed using STATA.

Research Model. There is one dependent variable (i.e., agency cost) and five independent variables (i.e., insider ownership, institutional ownership, dividend policy, firm size, and capital structure) that are used in this research. The general model of simple linear regression was developed to analyze each hypothesis in this study. The regression models that were used to test the hypotheses are:

H_1: $ACOS = \alpha + \beta\ INDO_{it} + \mathcal{E}$

H_2: $ACOS = \alpha + \beta\ INTO_{it} + \mathcal{E}$

H_3: $ACOS = \alpha + \beta\ DIVD_{it} + \mathcal{E}$

H_4: $ACOS = \alpha + \beta\ SIZE_{it} + \mathcal{E}$

H_5: $ACOS = \alpha + \beta\ CAPS_{it} + \mathcal{E}$

Where,

ACOS = Discretionary expense ratio of company i on year t, measured by discretionary expense (expense that could

be controlled by the management for example travel expense, entertainment expense, advertising expense, and maintenance expense) divided by revenue.
INDO = Insider ownership of company i on year t, measured by the percentage of the ownership that is held by the board of directors and the board of commissioner.
INTO = Institutional ownership of company i on year t, measured by the percentage of shares owned by other institutions.
DIVD = Dividend policy of company i on year t, measured dividend payout ratio which is the ratio of cash dividend to net income.
SIZE = Firm size of company i on year t, measured by the natural logarithm of the firm's total assets.
CAPS = Capital structure of company i on year t, measured by debt to equity ratio.

RESULTS AND DISCUSSIONS

Classical Assumption Tests

Heteroskedasticity Test. Heteroskedasticity problem occurs when the variance of a variable is not constant. To conduct the Heteroskedasticity test, the Breusch-Pagan/ Cook-Weisberg test in STATA was used. The results can be seen on Table 1**.**

Table 1 Heteroskedasticity Test

Hypothesis	Prob > chi2
$H_0$1	0.0255
$H_0$2	0.0094
$H_0$3	0.4813
$H_0$4	0.5183
$H_0$5	0.0348

Table 1 shows that the probability value for $H_0$1, $H_0$2, and $H_0$5 are less than 0.05, which means that there are heteroskedasticity problems for those hypotheses testing. However, the heteroskedasticity problem was able to be controlled by using robust standard error.

Autocorrelation Test. To test the autocorrelation, Breusch-Godfrey LM test was conducted in STATA. The results can be seen on Table 2, which shows that the probability values of the autocorrelation test for all hypotheses are more than 0.05, which means there are no autocorrelation problem in the data.

Table 2 Autocerelation Test

Hypothesis	Prob > chi2
$H_0$1	0.7325
$H_0$2	0.6151
$H_0$3	0.7699
$H_0$4	0.8990
$H_0$5	0.6948

Insider Ownership and Agency Cost. The result of the first hypothesis testing can be seen on Table 3. Table 3 shows the impact of the insider ownership on the agency cost. The table shows that the *p*-value is 0.000 which is lower than 0.05. The result concludes that $H_0$1 is rejected, which means that the insider ownership has a significant impact on the agency cost. Table 3 also shows that the unstandardized coefficient beta is -0.499, which means the insider ownership has negative impact on agency cost.

Table 3. The Impact of Insider Ownership on Agency Cost

Variable	Coefficient	p > | t|
INDO	-0.499	0.000
CONSTANT	0.125	0.000
Dependent Variable		ACOS
R-squared		0.125
F Test		39.31
Prob > F		0.000
Number of Observation		64

This result is similar to the findings of studies conducted by Ang et al. in 2000 and Gul et al. in 2012. They concluded that higher insider ownership might result on lower agency cost. This might be caused by higher control of the owner-

manager inside the firms. Higher proportion of insider ownership would make it easier to align the stockholders' interests with the managers' interests within the firm. This also creates a sense of belonging among the managers toward the firm. When a manager also acts as the owner of the firm, he/she tends to maximise his/her return as the firm's owner instead of maximising the benefit as a manager.

Institutional Ownership and Agency Cost. The result of the second hypothesis testing is shown in Table 4. Table 4 shows the impact of the insider ownership on the agency cost. The table shows that the p-value is 0.021 which is lower than 0.05. The result concludes that $H_0$2 is rejected, meaning that the institutional ownership has a significant impact on the agency cost. It can be seen that the unstandardized coefficient beta is 0.159, which means the institutional ownership has a positive impact on the agency cost. An increase on the percentage of the institutional ownership by 1% might result in an increase of the percentage of the agency cost by 0.159%.

Table 4. The Impact of Institutional Ownership on Agency Cost

Variable	Coefficient	p > | t|
INTO	0.159	0.021
CONSTANT	-0.005	0.916
Dependent Variable		ACOS
R-squared		0.072
F Test		5.64
Prob > F		0.021
Number of Observation		64

This result is similar to the study of Nekounam et al. (2013) in Iran which concluded that the increase of institutional ownership would also increase the amount of agency cost. This might be the result of more dispersed of institutional ownership on the majority of samples; which causes the lack of control power by the institutions toward the firm. It is also similar to another finding in Nekounam et al.'s study which found that more dispersed institutional ownership may cause larger agency cost. This situation is more likely to create agency cost on a firm.

Dividend Policy and Agency Cost. The result of the third hypothesis testing can be seen in Table 5. This table shows that the p-value is 0.501 which is higher than 0.05. The result concludes that $H_0$3 is failed to reject. That means dividend policy does not have significant influence on agency cost.

Table 5. The Impact of Dividend Policy on Agency Cost

Variable	Coefficient	p > | t |
DIVD	0.266	0.501
CONSTANT	0.100	0.000
Dependent Variable		ACOS
R-squared		0.007
F Test		0.46
Prob > F		0.501
Number of Observation		64

This result is similar to the finding of a study conducted by Widana Putra and Ratnadi (2008). They found no evidence that dividend policy could affect agency cost. It might be caused by the fluctuation or relatively small dividend payment made by the sample firms. The sample firms that were used in this research probably are still growing. Thus, they make several new investments and develop more research. In this situation, the shareholders might not pay too much attention on dividend payment because the dividend policy may not affect their benefits in the short-term.

Firm Size and Agency Cost. The result of the statistic test for the fourth hypothesis is shown in Table 6. The results show that the p-value is 0.715 which is higher than 0.05. The result concludes that $H_0$4 is failed to reject. That means the firm size does not have significant impact on the agency cost.

Table 6. The Impact of Firm Size on Agency Cost

Variable	Coefficient	p > | t |
SIZE	0.002	0.715
CONSTANT	0.061	0.647
Dependent Variable		ACOS
R-squared		0.002
F Test		0.13
Prob > F		0.715
Number of Observation		64

The size of the firm could not control the amount of the agency cost. This might be the result of different types of problems that are caused by the difference in size. Small and large firms posses diferent problems that might results in agency cost. Small firms are lack of effective good corporate governace mechanism that could easily lead the managers to commit unnecesary spending. On the other hand, large firms have more complex business process and information dificulties that may result in lack of control toward the managers of the firm. The problems might be different, but all of them might cause agency cost.

Capital Structure and Agency Cost. The result of the statistic test for the fifth hypothesis is shown in Table 7. It shows the impact of the capital structure on the agency cost where the p-value is 0.002. The result concludes that $H_0$5 is rejected. That means the capital structure has significant impact on the agency cost. Table 7 also shows that the unstandardized coefficient beta is -0.050, which indicates the capital structure has a negative impact on the agency cost. An increase on the percentage of the debt to equity ratio by 1% might result in the decrease of the percentage of the agency cost by 0.050%.

Table 7. The Impact of Capital Structure on Agency Cost

Variable	Coefficient	p > | t |
CAPS	-0.050	0.002
CONSTANT	0.150	0.000
Dependent Variable		ACOS
R-squared		0.108
F Test		10.52
Prob > F		0.002
Number of Observation		64

This result is consistent with the studies of Jensen and Meckling (1976) and Brigham and Daves (cited in Fachrudin, 2011) which suggested that a high debt ratio was effective to reduce the amount of agency cost. The increase of debt in the capital structure would increase the risk that the firm is not able to pay the interests and principals. This might cause the managers to be more cautious in making decision and reduce unnecessary spending to ensure that the firm is able to pay the interest and the principal when the debt is mature. Also this will give creditors some control toward the firm. The controling power from the debt holder will limit the ability of managers to make decisions freely.

CONCLUSION

This study examined several factors that were considered to affect the amount of agency cost within a company. To test those factors, manufacturing companies listed on IDX from 2010 to 2011 were used as the population. However, only 32 companies met all the sampling criteria.

The first factor tested in this study is the composition of ownership within the firms. This research found that the insider ownership has a significantly negative impact on the agency cost, meaning that by increasing the amount of the insider ownership, it could help the firm to reduce the agency cost. The result also showed that the second factor, the outsider ownership held by other institutions, has a significantly positive impact on the agency cost. Another factor tested in this study is the dividend policy which is commonly used as monitoring and bonding mechanism for the management. It is found that the dividend policy does not have significant impact on the agency cost of manufacturing companies listed on IDX. The firm size is also considered to be able to affect agency cost. Larger firms

are deemed to have better procedure and more effective corporate governance compared to smaller firms. However, this study found that the size of the firm does not affect the amount of the agency cost. The last factor that was tested in this study is capital structure. This research found a similar result from previous studies that the capital structure has a significantly negative impact on the agency cost. This means by increasing the debt, the amount of the agency cost could be reduced.

The results of this study could be considered as one of the criteria to create proper corporate governance as well as investment criteria in order to mitigate the agency cost in manfacturing firms. For the firms' management, the management could consider to increase the percentage of debt within the capital structure in order to lower the agency cost that might occur. For firm owners and investors, it should be considered to give more proportion of ownership to the managers as it might lower the agency cost. Investors could also consider to invest their money on firms that have lower proportion of institutional ownership, as firms with higher institutional ownership might have higher agency cost.

This research has several limitations. First, it is only conducted on two-year time period. Different or longer time period could have different results. Second, this research is conducted only in one sector in IDX. The result of one sector could not be generalized to other sectors because of different characteristics that they possess. Third, this study did not test all factors that might be able to control the agency cost. There are other factors which are considered to be able to affect the agency cost such as concentration of ownership, risk, board size, and CEO duality. Fourth, this study only used discretionary expense as the proxy of the agency cost. There are several other measurements that could be used as the proxy of agency cost such as asset utilization ratio, numbers of investment taken by the firm, and the interaction of free cash flow and growth opportunity.

With the given limitations, there are several recommendations that could be considered for future research. First, future researcher could use longer time period to get more accurate result. Second, future researcher could conduct the study in other sectors or all companies listed on IDX. Third, future researcher could test other factors that might affect the agency cost. Lastly, Future researcher could also use other measurements as the proxy of the agency cost.

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