# The Influence of Size of Firm and Leverage Toward Dividend Payout Policy with The Type of Companies as Controlling Variable

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#### **SUMMARY**

The study is entitle "The Influence of Size of Firm and Leverage Toward Dividend Payout Policy with The Type of Companies as Controlling Variable". The purposes of this study were: first to determine the influence of size of firm and leverage towards dividend payout policy, Second to determine that type of companies impact to the result of size of firm and leverage toward dividend payout policy. The hypothesis purposed in this study were: first is size of firm has significant and positive effect on the dividend payout policy, Second is leverage has significant and negative effect on the dividend payout policy, third is type of company as controlling variable the relationship between size of firm and leverage towards dividend payout policy. Based on the results of the analysis and discussion, it can be concluded that size of firm has significant and positive effect and leverage has significant and negative effect on the dividend payout policy and type of companies do not act as controlling variable on the relationship between size of firm and leverage towards dividend payout policy. The implications of this study are the management of manufacturing and non manufacturing companies listed on Indonesia Stock Exchange needs to consider variable that affect dividend payout policy namely size of firm Moreover managers should minimize be amount of debt financing because leverage has negative influence on dividend payout policy.

Keyword: Dividend payout policy, Size of firm, Leverage, and Type of companies

#### I. INTRODUCTION

#### A. Research Background

Dividend payout decision is a critical decision area and its one of the most important financial policies decision, not only from the position of the company, but also from that of the shareholders and others

such as the employees and regulatory bodies (Omar, 2009). More importantly, analysis of dividend policy is useful in enabling policy makers to identify the success or failure of policy initiatives or, alternatively, highlight different strategies undertaken by companies, which contribute to their successes (Omar, 2009).

Several theories have emerged to explain why firms pay dividends. Three

theories are the dividend irrelevance theory, the bird in the hand theory and the tax preference theory. Miller and Modigliani (1961) viewed dividends as irrelevant and they argue that given perfect capital markets, the payment of dividends does not affect the value of the firm and is therefore irrelevant. Gordon and Walter (1963) present the bird in the hand theory which says that investors always prefer cash in hand rather then a future promise of capital gain due to minimizing risk. Miller and Scholes (1978) find that the affect of tax preferences on clientele and conclude different tax rates on dividends and capital gain lead to different clientele. Miller and Scholes (1978) find that the effect of tax preferences on clientele and conclude different tax rates on dividends and capital gain lead to different clientele.

Other theoretical issues that could affect over views toward dividend payout policy, such us: agency cost, clientele effect, and signaling or information content (Ahmeed and Javid, 2009). The agency theory of (Jensen and Meckling (1976) is based on the conflict between managers and shareholder and the percentage of equity controlled by insider ownership should influence the dividend policy. Easterbrook

(1984) gives further explanation regarding agency cost problem and says that there are two forms of agency costs; one is the cost monitoring and other is cost of risk aversion on the part of directors or managers. The explanation regarding the signaling theory given by Bhattacharya (1980) and Williams (1985) is that dividends allay information asymmetric between managers and shareholders by delivering inside information of firm future prospects.

There are differences in research on the effect of size of firm on dividend payout policy. On research by Horace (2003) in Australia and Juhmani (2009) it is found that the size of firm has positive influence on Dividend payout Policy. This research is different if compare with the research by Horace (2003) in Japan and Ahmed and Jafeed (2009) that showed the size of firm has negative effect on the Dividend Payout Policy.

There are differences in research on the effect of leverage on the dividend payout policy. On research of Hafeez Ahmed and Javid (2009), it is found that the leverage has negative effect on dividend payout policy. The study is different from the research of Juhmani (2009), that leverage does not have a relationship with dividend

payout policy. There are differences in research on the effect of size of firm on dividend payout policy. On research of Horace (2003) in Australia and Juhmani (2009), there are found that the size of firm has positive influence on dividend payout policy. This research is different if compare with the research by Horace (2003) in Japan and Ahmed and Javid (2009) that showed the size of firm has negative effect on the dividend payout policy.

By knowing difference research results about dividend payout policy, it is interesting to develop and investigate the research about The influence size of firm and leverage toward dividend payout policy in manufacture and non manufacture companies listing in the stock exchange of Indonesia (IDX)

#### B. Problem Statement

Based on previous research publication, then main problem of this research are formulated as follow:

- 1. What is the relationship between size of firm and leverage toward dividend payout policy?
- What is the relationship type of companies as controlling

variable between size of firm and leverage toward dividend payout policy?

## C. Research Objective

## 1. General Purpose

To determine the influence of size of firm and leverage toward dividend payout policy.

# 2. Specific Purpose

To determine that type of companies impact to the result of size of firm and leverage towards dividend payout policy.

#### D. Research benefits

#### 1. Theoretical benefits

This research can describe the different research of size of firm and leverage toward dividend payout policy.

#### 2. Practical benefits

To Provide information to selecting investment in the stock market and find out factors that influence dividend payout policies

#### E. Research Framework

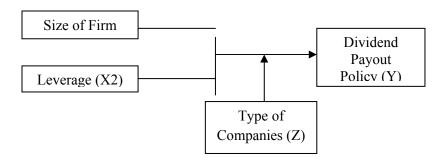


Figure 1.1 Research Framework

## F. Hypothesis

Based on the theory that it was exposed, it can be hypothesized as follow:

H1: Size of firm has significant and positive effect on the dividend payout policy

# II. RESEARCH METHODS AND TECHNIQUES OF DATA ANALYSIS

# A. Research Design

# 1. Research Type

Research conducted for comparative causal research to explain how the influence of the research object. Causal comparative research in addition to measuring the strength of ties between two or more variables, also shows the direction of the

H2: Leverage has significant and negative effect on the dividend payout policy

H3: Type of company as controlling variable the relationship between size of firm and leverage towards dividend payout policy

relationship between independent variables with the dependent variable. In other words, causality studies question the issue of existence of causation. The causal relationship is clear from the results of causal comparative research there is no control over independent variables, the results of this study are generally tentative (Kuncoro, 2009: 15). While the methods used in research is a method of linear regression with controlling variable statistics to know the effect of size of firm and

leverage on the dividend payout policy of the type of firm listed on the Indonesia Stock Exchange (IDX).

### 2. Research Object

Object of this research are the dividend payout policy, size of firm, leverage, and firm type.

# 3. Population and Sample

The population of this research is all of manufacture and non manufacture companies and listed on the Indonesian Stock Exchange (IDX) during 2006 to 2010. Samples were selected using purposive sampling method, non-random sample selection in which sample are chosen based on certain considerations.

# 4. Source and Type of Data

Data of this research is secondary type of data obtained from financial statement and supporting documents on the manufacture and non manufacture companies listed in the Indonesian Stock Exchanges (IDX) during 2006 to 2010.

# Operational Definitions and Measurement Variables

Based on literature review and previous research, operational definition and measurement variable in this research are as follow:

 Dependent variable (Y) is Dividend Payout Policy

The decisions taken by a company in sharing profits are derived by an enterprise in the form of dividends to shareholders.

$$DPR = \frac{DPS}{EPS}$$
.....(1)

Where

DPR : Dividend

Payout Ratio

DPS : Dividend Per

Share

EPS : Earning Per

Share

#### 2. Size of Firm

Scale the size of the company is defined by several things including the total sales, total assets, and the average level of sales (Perry and Rimbey, 1995).

Firm Size 
$$(X1) = Ln$$
 of total asset.....(2)

Where Ln: Natural

Logarithm

3. Leverage

In general, leverage is divided into operating leverage and financial leverage. Operating Leverage is the use of company assets or operations accompanied by a fixed cost. How far from certain changes affect sales volume and net operating income (Weston and Brigham, 1990: 166).

$$LEV = \frac{TL}{TA}$$

(3)

- B. Techniques of Data Analysis
  - 1. Classical Assumption Test
    - a. Normality test
    - b. Multicolinearity test
    - c. Heteroscedasticity test
    - d. Autocorrelation test
  - Regression analysis
     The group of manufacturing
     and non-manufacturing

Where LEV = Leverage

TL = Total

Liability

TA = Total Asset

4. Firm Type

In general, There are two type of firm, manufacturing and non manufacture companies. Manufacture company is companies that produce large quantities of goods to be sold, using machinery. In manufacture meantime, non company is company provide goods or services. The of manufacture example companies are trading companies, banks, and insurance.

companies regression formula:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e....(1)$$

The group of manufacturing companies regression formula:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e....(2)$$

The group of nonmanufacturing companies regression formula:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e....(2)$$

Description of variables in the formula above, as follows:

Y is the dependent variable,  $\alpha$  is Constanta

 $b \quad is \quad the \quad slope \quad (slope)$  associated with variables  $X_1, \ X_2, \ ...$   $X_n.$ 

 $X_1$  is Size of firm  $X_2$  is Leverage E is error

#### 3. t statistic

This is to test the regression coefficients partially of independent variables (to whether know each independent variable to significantly influence the dependent variable). The basic decisions are analyzed using SPSS.

Tests using the prediction are as follows:

H0: 
$$\beta i = 0$$

This means there is no partial effect between  $X_1, X_2, ... X_n$  to Y Ha:  $= \beta i \neq 0$ 

This means that there is a partial effect between  $X_1, X_2, \dots, X_n$  against Y.

Criteria: The hypothesis is acceptable if the level of significance of  $t < \alpha = 0.05$  or t count < -t table or t count > t table. (Imam Ghozali, 2001: 87).

If the result of  $\varpi$  testing H0 is accepted, Ha is rejected. it can be concluded there is no partial effect between each of  $X_1, X_2, \dots X_n$ to Y, so the formula can not be used to perform forecasting of determination of Dividend Payout Policy (DPP) in the future.

If the result of w testing H0 is rejected, then Ha is received, it can be

concluded there is a partial effect between each of  $X_1, X_2, ...... X_n$  to Y, so the formula can be used to perform forecasting for decision making in the Dividend Payout Policy (DPP) the future.

#### 4. F statistic

This is to test the significance of the influence of all independent variables together - similar to the dependent variable. Basic decisions are analyzed using SPSS.

Tests using the prediction are as follows:

H0: 
$$\beta 1 = \beta 2 = 0$$

This means there is no simultaneous effect between  $X_1, X_2,..., X_n$  against Y.

Ha:  $\beta 1 = \beta 2 \neq 0$ 

This means there are significant effect simultaneously between  $X_1, X_2, ... X_n$  against Y.

Criteria: The hypothesis is acceptable if the level of significance of  $F < \alpha = 0.05$  (sign  $F < \alpha$ ) or F count > F table. (Imam Ghozali, 2001: 95).

- If the results of testing H0 are accepted, Ha is rejected. It can be concluded there was simultaneous effect between X<sub>1</sub>, X<sub>2</sub>,  $\dots$   $X_n$  to Y, so the formula can not be used perform forecasting for the determination of dividend payout policy (DPP) decisions in the future.
- On the contrary, if the results of testing H0 are rejected, then Ha is received. It can be concluded there are significant effect simultaneously between X<sub>1</sub>, X<sub>2</sub>, ... X<sub>n</sub> to Y, so the formula

can be used to perform forecasting for the determination of dividend payout policy (DPP) decisions in the future.

# 5. Controlling Effect Test (H<sub>3</sub>)

To test the third hypothesis which states that type of companies as controlling variables the influence the size of firm and

# III. RESULTS AND DISCUSSION

- A. Data Analysis
- 1. Classical Assumption Test Results
  - a. Normality Test Results

leverage on dividend payout policy Chow-test is used, with the formula as follow:

$$F = \frac{(RSSr - RSSur)/k}{(RSSur)/(n1 + n2 - 2k)}$$

Accepted criteria:

With degrees of freedom (k - 1) (n - k) and the confidence level of 95% or  $\alpha = 0.05$ , then:

Ho is accepted if  $F_{calculate} \le F_{table}$ H0 is rejected if  $F_{calculate} >$ 

F<sub>table</sub>

Normality test is to test whether the regression model, the dependent variable and independent variables both have normal or near normal distribution. The statistical test can be used to test the normality of residuals is non-parametric statistical test Kolmogorov-Smirnov (KS). Kolmogorof-Smirnov test results can be seen in the table below:

Table 3.1. One-Sample Kolmogorov-Smirnov Test Result

One-Sample Kolmogorov-Smirnov Test

			Unstandardiz ed Residual
N			155
Normal Parameters	a,b	Mean	0387097
		Std. Deviation	.5330300
Most Extreme		Absolute	.039
Differences		Positive	.033
		Negative	039
Kolmogorov-Smirnov Z			.490
Asymp. Sig. (2-tailed)			.970

a. Test distribution is Normal.

From the table above, it can be seen the value of Kolmogorov-Smirnov for 0.490 and asymptotic significance level

is 0.970. This value is greater than alpha 0.05 then the residuals are normal distributed or the residuals in normal distribution.

# b. Multicollinearity test results

The purpose of multicollinearity test is to test whether the regression models are found correlations between independent variables. To detect the presence or absence of multicollinearity in the regression

model is by viewing the value of tolerance and Variance Inflation Factor (VIF). Value commonly used to indicate the existence of multicollinearity is the tolerance value < 0.10 or equal to the value of VIF > 10 (Ghozali, 2001).

Table 3.2. Multicollinearity Test Result

#### Coefficient<sup>8</sup>

		Jnstandardized (		Standardized Coefficients	Collinearity	/ Statistics
Model		В	Std. Error	Beta	Tolerance	VIF
1	(Constant)	000000000007	.076			
	Firm Size (X1	.397	.085	.397	.795	1.258
	Leverage (X2	181	.085	181	.795	1.258

a. Dependent Variable: Dividend Payout Policy (Y)

From table 3.2 can be seen the results of the calculation from the VIF value that indicates there is no multicollinearity.

b. Calculated from data.

#### c. Heterocedasticity Test Result

Heterocedasticity is a state in which variants of each variable disturbance (disturbance term) limited by a specific value on the free variables does not form a constant value equal to  $\sigma^2$ . To determine whether there is a problem heterocedasticity will be tested by test Park. The heterocedasticity test results can be seen in table 4.3:

Table 3.3. Heterocedasticity Test Result

#### Coefficients

				Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.517	.063		8.254	.000
	Firm Size (X1)	.006	.071	.007	.079	.937
	Leverage (X2)	.065	.071	.083	.915	.362

a. Dependent Variable: ABRESID

The test results at a significance level of 5% shows the value of the variable probability of all independent variables were greater from the

0.05, It can be concluded that the variables of the size of firm and leverage has no heteroscedasticity problem.

#### d. Autocorrelation Test Result

Autocorrelation test is to test whether a linear regression model is no correlation between bullies error in period t with an error in period t-1 (before). There are several ways to detect the presence or absence of autocorrelation, one of which is the test of Durbin - Watson (DW

test). Test Durbin - Watson is only for first-degree used autocorrelation (first order Autocorrelation) and require an (constant) intercept in the regression model and no variable lag between the independent variables. The Durbin-Watson test

results can be seen in the table

below:

Table 3.4. Autocorrelation Test Result

#### Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-W atson
1	.354 <sup>a</sup>	.125	.114	.9414	1.831

a. Predictors: (Constant), Leverage (X2), Firm Size (X1)

b. Dependent Variable: Dividend Payout Policy (Y)

From Table 3.4, It can be seen Durbin-Watson value of 1.831 because of the DW was greater than value of (dl) and (du) in the amount of 1.57 and 1.72 it

can be concluded no positive autocorrelation in regression models.

# 2. Hypothesis Testing

a. Group of Total Companies(Manufacturing and Non-Manufacturing)

Based on regression analysis of the total sample group of companies (manufacturing and non-manufacturing companies) with the help of the software SPSS 17.0 for Windows (Appendix 4), then obtained results of calculations that can be summarized as shown on Table 3.5.

Table 3.5. Result of Regression Analysis of Total Companies (Manufacturing and Non-Manufacturing)

No.	Variables	Regression Coefficients	t calculate	t table
1.	Size of Firm (X <sub>1</sub> )	0.397	4.667	1.985
2.	Leverage $(X_2)$	-0.181	-2.126	-1.985

# 1) Regression Equation

Based of the data on Table 4.5 it was know the equation of controlling regression analysis is as follows:

DPP = 0.000000000007 + 0.397Size - 0.181Lev

The equation ca n be interpreted as follows:

- a) Constant of 0.000000000007 states that if the variables size of firm and leverage assumed to be constant, then the value of dividend payout policy in the to amount of 0.
  - b) The coefficient of regression size of firm of 0.397 explained that any increase size of firm would increase dividend payout policy.
  - c) Regression coefficient of regression leverage of 0.181 explained that any increase leverage would increase dividend payout policy.

- Assessing Goodness of Fit a Model
  - a) The Coefficient of Determination

The coefficient of determination (R<sup>2</sup>) essentially measure how far the ability of models to explain variation in the dependent variable. The value of determination coefficient is between zero and one. The R<sup>2</sup> is small means that the ability of independent variables explaining variations in the dependent variable is very limited. Value close to one means that the independent variables provide almost all the information needed to predict the variation of the dependent variable. The value of determination coefficient in the regression results can be seen on Table 4.6 below:

Table 4.6. The Coefficient of Determination  $(R^2)$ 

#### **Model Summary**

		_	Adjusted	Std. Error of
Model	R	R Square	R Square	the Estimate
1	.354 <sup>a</sup>	.125	.114	.9414

a. Predictors: (Constant), Leverage (X2), Firm Size (X1)

Based on result, the coefficient of determination (R<sup>2</sup>) on manufacture and non manufacture companies were 0.125. This meant that 12.5% variable dividend payout policy of manufacture and non manufacture companies could be explained by the variables of size of firm and leverage. While the rest 87.5% influenced by other variables not included in the regression model.

b) Test of Simultaneously Effect (F-statistic)

F statistic test essentially indicates whether all the independent variables included in the model have jointly influence the dependent variable. Simultaneously test results can be seen in the table below:

Table 3.6. Simultaneously Test Result

#### **ANOVA**b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.304	2	9.652	10.892	.000 <sup>a</sup>
	Residual	134.696	152	.886		
	Total	154.000	154			

a. Predictors: (Constant), Leverage (X2), Firm Size (X1)

From the table 3.6 it is known the value of F calculate was 10.892 with a probability 0.000. Because F calculate (10.892) > F table (3.00), or probability F calculate (0.000) was smaller than 0.05, then Ho was rejected

and Ha was accepted, therefore it was proved that there was significant and simultaneously influence of size of firm and leverage would increase dividend payout policy. In the graph it can be described as follows:

b. Dependent Variable: Dividend Payout Policy (Y)

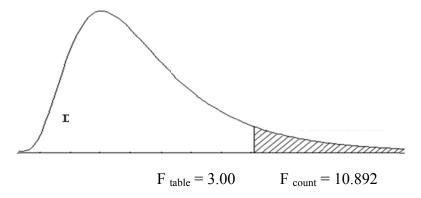


Figure 3.1. The Criteria of Simultaneously Effect Test

# c) Test of Partially Effect (t-statistic)

# H<sub>1</sub> : Size of firm has positive effect on dividend payout policy.

Based on table 4.5, regression coefficient of size of firm was positive for 0.397 with t  $_{calculated}$  size of firm is 4.667 with a significance level of 0.000. Viewed the t  $_{calculated}$  greater

than t table of 4.667 > 1.985 and a significance level that was smaller than 0.05 then the first hypothesis (H<sub>1</sub>) was accepted. In other words, size of firm has positive influence on dividend payout policy of manufacturing and non manufacturing companies listed in IDX year on 2006 until 2010.

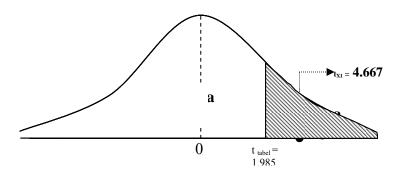


Figure 3.2. The Criteria of Firs Hypothesis with t-Test

# (1) Leverage Variable

# H2: Leverage has a negative effect on dividend payout policy.

Based on table 3.5, regression coefficient of leverage was negative for -1.985 with t  $_{calculate}$  of leverage was -2.126 with a significance level of 0.035. Viewed the t  $_{calculate}$  smaller than value of -t  $_{table}$  (-2.126 < -1.985) and a significance level that was smaller than 0.05 then the second hypothesis (H<sub>2</sub>)

was accepted. In other words, leverage has negative significant effect on dividend payout policy of manufacturing and non manufacturing companies listed in IDX year on 2006 until 2010. In the graph it can be described as follows:

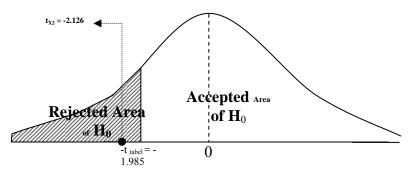


Figure 3.3. The Criteria of Second Hypothesis with t-Test

#### d. Chow Test

Table 3.7 Regression analysis of total companies

	ANOVA b							
Mod	del	Sum of Squares	df	Mean Square	F	Sig.		
1	Regression	19.304	2	9.652	10.892	.000 <sup>a</sup>		
	Residual	134.696	152	.886				
	Total	154.000	154					

a. Predictors: (Constant), Leverage (X2), Firm Size (X1)

Table 3.8 Regression analysis of manufacture companies

b. Dependent Variable: Dividend Payout Policy (Y)

ANOVA b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.781	2	7.390	8.217	.000 <sup>a</sup>
	Residual	114.219	127	.899		
	Total	129.000	129			

a. Predictors: (Constant), Leverage (X2), Firm Size (X1)

Table 3.9 Regression analysis of non manufacture companies

ANOVA b

	Model	Sum of Squares	df	Mean Square	F	Sig.
Γ	1 Regression	5.983	2	2.992	3.653	.043 <sup>a</sup>
ı	Residual	18.017	22	.819		
	Total	24.000	24			

a. Predictors: (Constant), Leverage (X2), Firm Size (X1)

Based on the results of regression analysis of the total group of samples, sample groups of manufacturing companies and groups of samples nonmanufacturing companies can be seen that:

- 1. The restricted residual sum of squares or RSSr (RSS3) for the total sample of observations of these types of companies manufacturing and non-manufacturing firms at 134.696.
- The restricted residual sum of squares or RSSr for the total sample of observations for 114.219 types of manufacturing companies.
- 3. The restricted residual sum of squares or RSSr for sample observation type

non-manufacturing companies for 18.017.

- 4. RSSur = RSS1 + RSS2 = 132.236
- 5. Calculating the value of F by the formula:

$$F = \frac{(RSSr - RSSur)/k}{(RSSur)/(n1 + n2 - 2k)}$$

$$F = \frac{(134.696 - 132.236)/3}{(132.236)/(130 + 25 - 6)} = 0.924$$

Based on the results of Chow-test it has got the value of F calculated is smaller than the value of F table. Thus, the third hypothesis which states that type of companies as controlling between size of firm and leverage toward dividend payout policy was rejected.

b. Dependent Variable: Dividend Payout Policy (Y)

b. Dependent Variable: Dividend Payout Policy (Y)

# IV. CONCLUSIONS AND IMPLICATIONS

#### A. Conclusions

- 1. Size of firm has positive significant effect on dividend payout policy of manufacturing and non manufacturing companies listed in Indonesia Stock Exchange (IDX).
- Leverage has negative significant effect on dividend payout policy of manufacturing and non manufacturing companies listed in Indonesia Stock Exchange (IDX).
- 3. Type of companies do not as controlling variable between size of firm and

leverage on dividend payout policy of manufacturing and non manufacturing companies listed in Indonesia Stock Exchange (IDX).

# **B.** Implications

- The management of manufacturing and non manufacturing companies listed in Indonesia Stock Exchange (IDX) needs to consider variable that affect dividend payout policy namely size of firm.
- more over managers should minimize be amount of debt financing because leverage has negative influence on dividend payout policy.

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# Appendix 4. Output of Regression Analysis of Moderation Sub-Groups (The Group of Manufacturing and Non-Manufacturing Companies)

# Regression

#### Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Leverage (X2), Firm Size (X1)		Enter

- a. All requested variables entered.
- b. Dependent Variable: Dividend Payout Policy (Y)

#### **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.354 <sup>a</sup>	.125	.114	.9414

a. Predictors: (Constant), Leverage (X2), Firm Size (X1)

#### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.304	2	9.652	10.892	.000 <sup>a</sup>
	Residual	134.696	152	.886		
	Total	154.000	154			

- a. Predictors: (Constant), Leverage (X2), Firm Size (X1)
- b. Dependent Variable: Dividend Payout Policy (Y)

#### Coefficientsa

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.000000000007	.076		.000	1.000
	Firm Size (X1)	.397	.085	.397	4.667	.000
	Leverage (X2)	181	.085	181	-2.126	.035

a. Dependent Variable: Dividend Payout Policy (Y)