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GENDER DIVERSITY'S BOARD STRUCTURES, OWNERSHIP STRUCTURE AND CORPORATE PERFORMANCE IN INDONESIAN COMPANIES

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Abstract

Purpose - The purpose of this paper is to investigate the impact of gender diversity in the structure of the board and ownership in relation to company performance in Indonesia.

Design/methodology/approach - The study used a sample of companies whose stocks are actively traded on the Indonesia Stock Exchange. The data used were panel data, namely, the data of cross section and time series from the period of 20011 to 2013. The sampling was simple random sampling, and the analytical techniques were panel data regression analysis.

Findings – The results obtained by random effects regression models show that gender diversity on board structure does not affect the company's performance. Furthermore, the gender diversity on the board of directors (BOD) stuctures have significant negatively effect on the performance. Finally, this study also found that institutional ownership has significant negatively effect on the performance. Similarly, the managerial ownership, showed similar results, namely a significant negative on the performance.

Keywords : corporate governance, gender diversity, board structure, ownership structure, Return on Equity (ROE)

Paper type: Research paper

Introduction

Corporate governance is the concept submitted for improving the performance of the company through the role and behavior of the board of commissioners, the board of directors, managers, and the shareholders. The achievement of Corporate governance also can make management more transparent for all company's stakeholders and can create added value for all interested parties.Sihite (2012) explained that the one of corporate governance isues is gender diversity in management positions. In addition, the issue of the most important and controversial corporate governance are concerning stock ownership structure associated with an increase in the company performance.

Theoretically, Gender in sociology referring to a typical characteristics associated with between male or female identity in society.In line with the understanding gender issues, the gender diversity referred to the research is how the role of women in the board of commissioners and board of directors affect the company's performance. Based on the Agency Theory, the contract between a manager as agents and investors as principal can cause agency problems. The problems are often cause of asymmetry information impact on the economic flawed.The emergence of asymmetry information this is what causes raises the agency cost (Jensen and Meckling, 1976).

Discussion regarding the corporate governancein Indonesiaisrelativelynew. Especially it is corellated by the gender diversity issues. Accordingto Suad Husnan (2000), intense discussion about gender issues in the corporate governanceinIndonesia has taken place sincethe financialcrisis beganinlate 1997.

Therefore, the Indonesian governmenttook an initiative toimprove regulationsof the corporate governance.The initiative was presented inthe form of "*Codes for Good CorporateGovernance"*, which was established by the National Committee on Corporate Governance. This initiative was also followedbyrecommendationsfor lawreformandlegislationtosupport the implementation ofthis code (KNKG, 2006). The

Committeebelieved thatthe importance of an institutional frameworkandfurther development ofpolicies for the codeatthe institutional level shouldbe appliedin the context ofIndonesia. Corporate governancereforms inIndonesiaare also aimedatstrengthening thecurrentinstitutionalstructure.

Research Methodology

The research will be carried out through the construction of a positive empiricalmodel. Data will be collected from the Indonesian Capital Market Directory (ICMD) and annual financial reports of firms listed on the Indonesian Stock exchange(IDX). Twenty seven companies listed on the IDXwill be selected based on a random sampling.The sample data to be collected will be for the period from2011to 2013.

The impact of gender diversity in the structure of the board and ownership in relation to company performancein this study will be tested by panel data regression analysis. Several statistical and econometric tests are used to test the models. The data used for these tests are a combination of cross-sectional and time series observations and are termed “panel data”.

Descriptive Statistics

Descriptive analysis from the data taken to this research is from 2011 up to 2013 with 81 data observation.A statistical distribution descriptive for each variable can be seen in table follows:

. sum

Variable	Obs	Mean	Std. Dev.	Min	Max
PERUSAHAAN	0				
IDCODE	81	14	7.83741	1	27
YEAR	81	2012	.8215838	2011	2013
ROE	81	9.649877	8.642961	-10.75	26.57
GKOM	81	30.74383	13.27948	10	66.67
GDIR	81	31.52716	11.94375	14.29	66.67
KEPINS	81	65.15988	19.42225	19.18	97.2
KEPMAN	81	9.23284	13.26254	.01	50.36
e	81	2.01e-08	7.476965	-17.92687	16.98981
_est_fixed	81	1	0	1	1
_est_random	81	1	0	1	1

Sumber : Hasil output STATA, data diolah 2015

Correlation analysis

Correlation analysis done aims to measure the magnitude of a linear relation between variable.As for the result of correlation analysis for each variable can be seen in table follows:

. pwcorr ROE GKOM GDIR KEPINS KEPMAN

	ROE	GKOM	GDIR	KEPINS	KEPMAN
ROE	1.0000				
GKOM	-0.2908	1.0000			
GDIR	-0.4078	0.2372	1.0000		
KEPINS	-0.2300	-0.2361	0.2557	1.0000	
KEPMAN	-0.0373	0.4813	-0.0269	-0.5984	1.0000

Sumber : Hasil output STATA, data diolah 2015

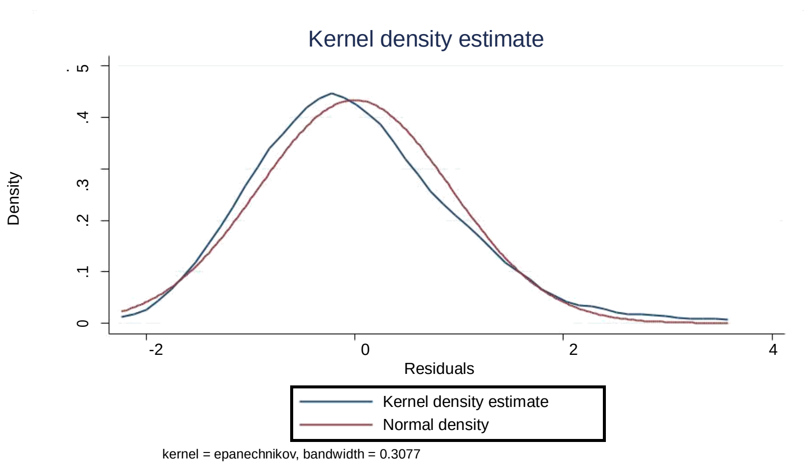
Normality Test

Normal distribution

To apply the pooled model analysis, the population from which the samples or observations are derived should be normally distributed. Several tools used to test the normal distribution are presented, such as kernel density plot (kdensity), normal probability plots (pnorm) and a quartile of a normal distribution (qnorm)(Cameron and Trivedi, 2009).

The normality testingof error observation is carried out on 81 observations, and it is performed directly on all the operational variables in this study. The results of the normality testing error (residual) are shown in the Figures 1, 2 and 3.

Figure 1: Kernel Density Estimate



The pattern of the normality graph in Figure 1 above shows the actual data that closely follow the linegiven an early normal density distribution pattern.Therefore, it can be stated that the data are normally distributed, which means that they are in conformity with the standard provisions required in the pooled models.

Figure 2: Standardized Normal Probability Plots (*pnorm*

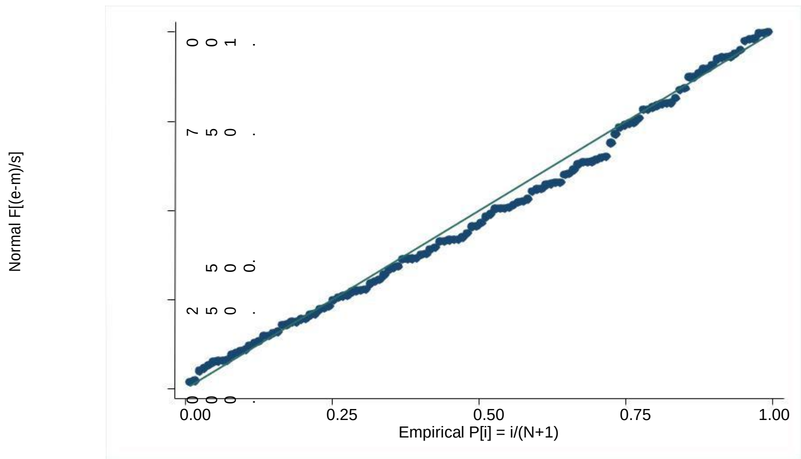
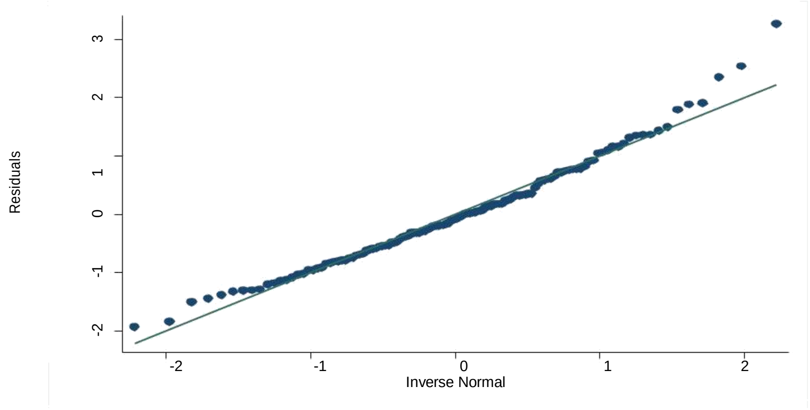


Figure 5. 2: Quartiles of a Normal Distribution (*qnorm)*



The Figures above denote the quartiles of a normal distribution (qnorm). This study also presents the standardized normal probability (pnorm) and quartile of a normal distribution (qnorm) in Figures 2 and 3, which are used to check whether the data have non-normality in the middle range of residuals.The Figures show that the distribution of residuals does not deviate from the diagonal line (normal distribution), which means that the normal distribution assumption is not violated, i.e. the residuals are distributed normally. Therefore, the examination of the normality plot of the models employed in this papersuggested aminor deviation from normality.

Independent observation

Independent observation can only be claimed when every observation or measurement is notaffected by other observations or measurements (multicolinearity).The tolerance factor and variance inflation factor (VIF) furthermorecan be used to identifymulticollinearity (Cameron and Trivedi, 2009, Gujarati, 2011).In this research, the VIF and the 1/VIF were calculated to identify the multicollinearity, the results of which are presented in Table 2. Table 2: Varian Inflation Factor (VIF)

. vif

Variable	VIF	1/VIF
KEPMAN	1.93	0.519020
KEPINS	1.71	0.584355
GKOM	1.42	0.705645
GDIR	1.19	0.840190
Mean VIF	1.56	

Sumber : Hasil output STATA, data diolah 2015

Homogeneity of variance

Homogeneity, also known as homoscedasticity for research that has grouped data is an assumption that samples are obtained from populations of equal variances, meaning that the variability of scores for each group is similar (Gujarati, 2006). One of the problems commonly encountered inregression analysis is *hetero-scedasticity* (unequal variance) in the error term. The heteroscedastisity indicatesthat the presence of confounding effects is caused by inter-variant, in which variant of the independent variable affects the dependent variable variance.The Breuch-Pagan test is employed to test heteroscedastisity (Cameron and Trivedi, 2009). The Breuch-Pagan test results are presented in Table 3.

Table3: Breusch-Pagan / Cook-Weisberg test for Heteroscedasticity

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of ROE

         chi2(1)      =     1.12
         Prob > chi2  =   0.2890
```

Sumber : Hasil output STATA, data diolah 2015

The result in Table 3 suggests the possible presence of heteroscedasticityin both of the agency costs models. The null hypothesis of the homocesdasticity is rejected and heteroscedasticity in the error term highly likely.

Model estimation test

Regression panel data can be done with three model namely the common effect, fixed effect, and random effect, there are several model test on panel data regression models including; *Pagan Lagrangian Multiplier* (LM-Test), or Hausman Test to tests whether the model is fixed effect, random effect, or pooled OLS.

```
Breusch and Pagan Lagrangian multiplier test for random effects

        ROE[IDCODE,t] = Xb + u[IDCODE] + e[IDCODE,t]

        Estimated results:
                         |       Var     sd = sqrt(Var)
                ---------+-----------------------------
                     ROE |   74.70078       8.642961
                       e |   13.35531       3.654492
                       u |   51.26753       7.160135

        Test:   Var(u) = 0
                             chibar2(01) =    43.95
                          Prob > chibar2 =   0.0000
```

Sumber : Hasil output STATA, data diolah 2015

```
. hausman fixed random

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     fixed        random       Difference          S.E.
-------------+----------------------------------------------------------------
        GKOM |    .3751186    -.0160594         .391178        .1839211
        GDIR |    -.232041    -.2008724       -.0311686        .0635565
      KEPINS |   -.1930699    -.1723542       -.0207157        .0840191
      KEPMAN |   -.2680399    -.1955877       -.0724522        .0915172
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        5.82
                Prob>chi2 =      0.2133
```

Sumber : Hasil output STATA, data diolah 2015

Based on the tabel output above, shows that the chi2 larger than a significant degree, it can be concluded regression technique panel data with random effects better than the data with regression panel fixed effects .Based on the results of the determination of model with pagan test lagrangian multiplier (lm) and the hausman , shows that data random regression panel effects better than regression panel data with ordinary least square ols ( ) and fixed effects .Thus inconclusive regression panel data on this research use the model random effects .

Random Effect Regression Model

Based on the results of the estimation model, the random effect is the most effective model to analyse regression data panel.As for the result of the regression random effect can be seen in the table below:

```
. xtreg ROE GKOM GDIR KEPINS KEPMAN

Random-effects GLS regression                   Number of obs      =        81
Group variable: IDCODE                          Number of groups   =        27

R-sq:  within  = 0.1314                         Obs per group: min =         3
       between = 0.2197                                        avg =       3.0
       overall = 0.2072                                        max =         3

                                                Wald chi2(4)       =     14.47
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0059

------------------------------------------------------------------------------
         ROE |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        GKOM |  -.0160594   .1091894    -0.15   0.883    -.2300667    .1979479
        GDIR |  -.2008724   .0815127    -2.46   0.014    -.3606343   -.0411104
      KEPINS |  -.1723542   .0690895    -2.49   0.013    -.3077671   -.0369413
      KEPMAN |  -.1955877   .1022267    -1.91   0.056    -.3959482    .0047729
       _cons |   29.51295   6.301101     4.68   0.000     17.16302    41.86288
-------------+----------------------------------------------------------------
     sigma_u |   7.160135
     sigma_e |  3.6544917
         rho |  .79333454   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Sumber : Hasil output STATA, data diolah 2015

$ROE_{it} = 29{,}51295 – 0{,}0160594\ GKOM_{it} – 0{,}2008724\ GDIR_{it} – 0{,}1723542\ KEPINS_{it} – 0{,}1955877\ KEPMAN_{it} + \varepsilon_{it}$

From the results of the regression equation above, can be seen that variable gender of board of commissioners, gender of the board of directors, institutional ownership, and ownership of managerial havenegativelyinfluence toward the company performance.

The coefficients determination

From the test the coefficients determination shows that the coefficients determination shown of the value of r-squared overalls namely 0.2072 .This means that 20,72% variation the company performance can be explained by variable gender the board of commissioners, gender board of directors, institutional ownership and ownership managerial, while the rest of 79,28 % the company performance described by other variables.

F Test

The testing of hypotheses the simultaneous shown in statistics wald chi-square= 14,47 , with probabilities = 0,0059, which would mean there are significant influence gender the board of commissioners, gender board of directors, possession of institutional, and ownership of the company'sperformance.

Independent variable used in this study the gender the board of commissioners, gender board of directors, possession of institutional and managerial ownership jointly impact on the company measured by roe (return on equity).It is seen from the extent of signification f in statistic wald chi-square less than 5 %.This shows that gender variable the board of commissioners, gender board of directors, possession of institutional and managerial ownership represent as a tool that can be used to reach of companies that optimal.

T Test

1. **Gender the board of commissioners and Company's Performance**

Estimation of the results of a variable gender the board of commissioners obtained the value of z = -0,15.The value of probability p 0.448; indicate its value more than 0.05 shows that variable gkom have not significant effect on against roe level of 5 percent.

The independent variable gender the board of commissioners has not been affecting the company performance.Thus h1 not accepted.Thus can be concluded that there are still of the limited number of woman had played a role in position top management in indonesia that until there is no influential a significant impact on the company performance.

2. **Gender board of directorsand Company's Performance**

The results of variable gender board of directors and Company's Performanceobtained value z = -2.46 with probabilities p 0.448; of 0,014.The probability reflects the less than 0,05 shows that variable gdir have significant influence on roe.

The independent variable gender board of directors have a negative influence on the company performance in a significant degree 5 percent , so that h1 accepted .Thus can be concluded that structure of the board of directors in indonesia more optimal led men compared to woman, because women are not capable and unable to in commanded a company.

3. **Institutional ownershipand Company's Performance**

The results institutional ownership variable obtained value z = -2.49 with probabilities p 0,448; of 0,013.The probability reflects the less than 0,05 shows that variable kepins have significant influence on roe.

Based on research results obtained that the number of institutional stock ownership impact on the company performance at a significant % 5, so h1 accepted.The obvious that increased possession institutional in the company will reduce the company the majority for institutional investors have a tendency to compromise or pro management and forget the minority shareholders at institutions and ownership up and the company will decline.

4. **Managerial ownershipand Company's Performance**

The results of managerial ownership obtained value z = -1,91 with probabilities p0.448; of 0,056.The probability reflects the same as 0,05 shows that variable kepman have significant influence on against roe.

Based on research results obtained that ownership of management will not affect the company performance at a significant % 5 , so h1 accepted .The obvious that increased possession managerial in the company will reduce the company due proportion managerial ownership in the company is still very low , with the number of shares ownership low cause manager prioritize the goal as a manager rather than as shareholders and managerial the application of ownership in increasing the company will not be effective.

Conclussion

This research test influence review board structure in perspective gender and ownership stucture on performance companies listed on the Indonesian stock exchange (IDX).The company performance in this study is measured using return on equity (ROE) with a period of years with 2011-2013 sample company. Conclusion that can be obtained from the research is as follows:

1. Research results obtained that gender the board of commissioners will not affect the company because because the existence of women in the top management was in question are incapable of being in leading company.
2. Research results obtained that gender board of directors have negative effects significantly to the company.
3. Research results obtained that institutional stake in have negative effects significantly to the company.
4. That research results obtained by the rank of stake in the company be managerial

Limitation of the study

As show with other empirical studies, this study also has several limitations. The limitations associated with this study are presented below.

Data

There are several limitationsin relation tothe data. This study observes only

27companies, which is less than 10 per cent of the population of companies listed in the IDX for the three years period of 2011-2013. Difficulties arose from the data collection processes due to the limitation of company's information, since In-donesia does not yet have a strong culture of compliance with disclosure requirements. The Indonesian Stock Exchange website does not provide sufficient available information, as it provides only limited information on certain accounting and corporate governance indicators. Furthermore, this study excludes all financial and property related to firms,hence, the results of this study cannot be generalized for these two industries. Moreover, the use of annual data derived from companies' annual reports may cause problems, particularly regarding companies' ownership structure. There might have been changesin ownership during the period of this study. However, this problem may not besignificant since the ownership structure is proxied by ownership concentration, and this pattern of the ownership structure is quite stable over the study period.

Methodology

The study usesthe panel data, with small panels for three consecutive periods. Consequently, each company will be treated as the same for each fiscal year during the study period. It is still possible to create biasness in the results. If the period of observationis likely to be able to alter the characteristics of the internal corporate governance mechanisms during the study period, the results would be different.

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