THE EFFECT OF RELATED-PARTY TRANSACTION, PROFITABILITY, LEVERAGE, AND EXECUTIVE EQUITY INCENTIVES ON THE OCCURRENCE OF ACCOUNTING IRREGULARITIES (AN EMPIRICAL STUDY ON NON-FINANCIAL COMPANIES LISTED ON IDX YEAR 2012-2014)

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Abstrak

The purpose of this study is to examine the determinants of accounting irregularities from its management, financial activities, and conditions. Based on fraud triangle theory and agency theory, variables related party transaction, profitability, leverage, and executive equity incentives are hypothesized to affect the occurrence of accounting irregularities. The occurrence of accounting irregularities was measured using dummy variable based on the incidence of financial restatement which resulted from either error or fraud. By using purposive sampling method, this study has drawn sample of 46 companies and 46 matched-pairs from total non-financial companies listed in IDX year 2012-2014. The hypothesis testing is done through binary logistic regression. The result of this study shows that, related party transaction which was measured by the percentage of receivables with related parties and profitability which was measured by ROA, have a significant positive impact on the occurrence of accounting irregularities. On the other hand, variable leverage measured by debt-to-equity and executive equity incentives measured by managerial ownership are not significantly affect the occurrence of accounting irregularities.

Keywords: Accounting irregularities, related party transaction, profitability, leverage, executive equity incentives.

1. Introduction

In the era of economic globalization, accounting manipulation is more likely to occur in business practices, the manipulation of financial statement is a result of the improper or irregular accounting practices in the way of violating the rules set in accounting policy (Feng et al., 2011). According to Jaswadi (2013), there have been and continues to be, serious financial scandals involving accounting irregularities in leading companies around the world, such as Enron and Indonesian company, PT Kimia Farma. Due to irregular accounting practices, an organization’s performance and financial position often look very different to the image painted by the financial statements (Elayan et al., 2009).

Many of the literatures show that the occurrence of accounting irregularities are often associated with Chief Executive Officer (CEO) equity incentives. Harris and Bromiley (2007), believe that there is a “strength of inducement” in equity incentives which may rise the likelihood of managerial impropriety and the probability of accounting misrepresentation. Apart from the compensation option, most of other studies linked accounting irregularities characterized by the occurrence of fraud with the fraud triangle theory put forward by Cressey. Lou and Wang (2009) attempted to examine the risk factors of the fraud triangle at the core of all the fraud auditing standards. By using a logistic regression model, the results show that the irregular financial reporting which lead to fraud is positively correlated with one of the following conditions: the financial pressure on a company, a higher ratio of a complex transaction (RPT), and the dubious integrity of the company's managers. Kwok (2005) uncover that based on the experience, there are several warning signs of possible accounting irregularities. One of them is significant transactions with related parties or other entities which are not in the ordinary course of business.

Watts and Zimmerman, (1986) and Feng et al., (2011) believe that the likelihood of accounting irregularities rises with the pressure to cover company’s bad performance. Low profitability may prompt the
management to manipulate earnings so that the company's profit will appear to be higher than how it actually is. When the leverage is high, the company will choose to use the possible accounting method to shrink the leverage ratio by shifting profits for the upcoming period to the current period.

Considering the above potential factors that might trigger the irregular accounting practice, this paper is maintained to seek various determinants of accounting irregularities. Unlike most of the previous studies which linked the incidents of accounting irregularities with the corporate governance and auditing, this study is more focused on the company's management, financial activities and condition. Accordingly, the percentage of related party transaction (RPT), ROA, leverage, and managerial ownership are used as proxy to observe the occurrence of accounting irregularities. The findings of this research are then expected to providescholarly evidence on the implication of related party transaction (RPT), ROA, leverage, and managerial ownership the occurrence of accounting irregularities to help financial statement users (investor, creditor, stakeholder, etc.), accounting standard setter, and regulators in finding ways to prevent accounting irregularities leading to economic problems.

2. Previous Studies

Many researchers (e.g. Albrecht et al., 2003 and Skousen et al., 2009;) relate accounting irregularities reflected in fraudulent financial reporting with the pressures and opportunities which are measured in many proxies such as related party transaction (RPT), profitability (ROA), and leverage (LEV). CEOs with equity-based incentives are also believed to have a positive association with accounting irregularities (Hasnan et al., 2013). However, the overall evidence in those literatures are still inconclusive. Whether related party transaction, profitability, leverage, and executive equity incentives can affect the occurrence of accounting irregularities is still an issue of continuing debate.

Cressey (1953) examined the fraud risk factors framework and proposed a theory that pressure, opportunity and rationalization namely “fraud triangle” are always present in fraud situation. Skousen et al., (2008) try to examine the effectiveness of Cressey’s theory and found that only proxy of pressure (rapid asset growth, increased cash needs and external financing) are positively related to the likelihood of fraud. Further, Lou and Wang (2009) found that fraudulent reporting is associated with one of the following conditions: the financial pressure on a company, a higher ratio of a complex transaction, and also dubious integrity of the company's managers. Hasnan et al., (2013) said that many profiles of fraudulent financial statements that resulted from accounting irregularities involve related-party transactions (RPT) and this has raised concerns among regulators about the best way to monitor companies that do so.

In regard to equity incentives, Elayan et al., (2009) in his research about accounting irregularities and management compensation structure found evidence that in firms experienced poorer operating performance the executive compensation structure is found to be significantly more equity-based. Therefore, he concludes that firms that have greater opportunity and incentive are more likely to commit accounting irregularities. Conversely, Armstrong et al., (2010) found different evidence that accounting irregularities occur less frequently at firms where CEOs have relatively higher levels of equity incentives.

3. Data Description and Method of Analysis

Data Description

This study employs quantitative approach and is aimed at investigating whether or not there is an effect of related-party transaction, profitability, leverage, and executive equity incentives on the occurrence of accounting irregularities. The data are drawn from IDX website, encompasses all listed non-financial companies covering the 2012-2014 period.

In this study, accounting irregularities is treated as the dependent variable and is measured using dummy variable based on the presence of restatement. Referring to the research by Armstrong et al., (2009), this research categorizes companies into two categories, for companies which experienced restatement due to error or fraud will be placed in category 1 (one) while companies with no restatement will be placed in category 0 (zero). The reason for choosing this measurement is because the restatement of financial statements is the most visible indicator of false accounting and is the source of the new investigation (Armstrong et al, 2009).
Variable of related-party transaction, profitability, leverage, and executive equity incentives are treated as the independent variable. Variable related-party transaction (RPT) is decoded as the percentage of transaction with related parties the company has done for the year. RPT is calculated by total receivables from related party to the total receivables of the company (Hasnan et al., 2013).

\[ RPT = \frac{\text{Total Receivables with related party}}{\text{Total Receivables}} \]

Profitability is proxied by return on asset (ROA) which is the ratio to measure the effectiveness of the company in generating profits by leveraging existing assets in the company (Ratmono et al., 2014). It can be formulated as follows:

\[ \text{ROA} = \frac{\text{Net profit after tax}}{\text{Total asset}} \]

Leverage variable (LEV) is used to determine how much the assets that exist in the company resulting from the debt. The financial leverage is calculated by dividing total liabilities by total assets (Spathis, 2002). The formula is as follows:

\[ \text{LEV} = \frac{\text{Total Liabilities}}{\text{Total Assets}} \]

Variable Executive Equity Incentive uses managerial ownership as a proxy. This is based on assumption that managerial ownership is a result of the compensation granted to the insiders of the company (Bergstresser and Philippon, 2006). Managerial ownership is defined as the percentage of equity owned by insiders and block holders, where insiders are defined as the officers and directors of a firm (Holderness, 2009). In this research, executive equity incentive is measured using metric data which distinguish companies into two categories, where companies with managerial ownership will be placed in category 1 (one) while companies without managerial ownership will be placed in category 0 (zero).

Logistic Regression Analysis

To examine the impacts of related-party transaction, profitability, leverage, and executive equity incentives on the occurrence of accounting irregularities, this study employs logistic regression models of the panel data, as follows:

\[ \ln\left( \frac{\text{AI}}{\text{AI-1}} \right) = a + B_1 \text{RTP} + B_2 \text{ROA} + B_3 \text{LEV} + B_4 \text{MO} + \varepsilon \]

Where AI is the accounting irregularities, a is the constant, B1, B2, B3, B4 are estimated parameter for related-party transaction, profitability, leverage, and executive equity incentives, and \( \varepsilon \) is the error term.

4. Empirical Results

Descriptive Statistics

A descriptivistatistics provide a description and overview of maximum value, minimum value, mean, and standard deviation of the data. The full description of the data collected in this study could be seen on table 4.1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI</td>
<td>102</td>
<td>0</td>
<td>1</td>
<td>0.50</td>
<td>0.502</td>
</tr>
<tr>
<td>RPT</td>
<td>102</td>
<td>0.0001</td>
<td>1.2953</td>
<td>0.1893</td>
<td>0.2685</td>
</tr>
<tr>
<td>ROA</td>
<td>102</td>
<td>-0.2500</td>
<td>2.0000</td>
<td>0.1399</td>
<td>0.3031</td>
</tr>
<tr>
<td>LEV</td>
<td>102</td>
<td>0.0060</td>
<td>1.0494</td>
<td>0.4916</td>
<td>0.2655</td>
</tr>
<tr>
<td>MO</td>
<td>102</td>
<td>0</td>
<td>1</td>
<td>0.4600</td>
<td>0.5010</td>
</tr>
</tbody>
</table>

Table 4.1 illustrates that for the dependent variable, the occurrence of accounting irregularities is represented by 0. The result for mean and standard deviation of this variable are 0.50 and 0.502 respectively.
Variable related party transactions shows minimum value of 0.0001, while the maximum value is 1.2953. Further, mean and standard deviation for this variable are 0.1893 and 0.2685. Variable profitability shows 0.3031 as its standard deviation and 0.1399 as its mean, this particular variable gets -0.25 as its minimum value and 2.0 as its maximum value. Next, Leverage variable shows minimum value of 0.006 and maximum value of 1.0494, while the value of the mean and standard deviation are 0.4916 and 0.2654 respectively.

For Executive Equity incentive which is illustrated by managerial ownership, the value of mean and standard deviation are 0.46 and 0.501 respectively. This particular variable gets 0 as its minimum value which represents companies without managerial ownership and 1 as its maximum value which represents companies with managerial ownership.

**Multicollinearity Test**

Multicollinearity test is used to ascertain whether or not there exists a correlation among the independent variables in a linear regression model. Ghozali (2011:108) uncovers that a good regression model does not have correlation among the independent variables. The indication of multicollinearity can be seen from a high correlation value between the independent variables (generally above 0.95). The result of correlation matrix can be seen in Table 4.2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Constant</th>
<th>RPT</th>
<th>ROA</th>
<th>LEV</th>
<th>MO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.000</td>
<td>-0.283</td>
<td>-0.369</td>
<td>-0.759</td>
<td>-0.599</td>
</tr>
<tr>
<td>RPT</td>
<td>-0.283</td>
<td>1.000</td>
<td>0.212</td>
<td>-0.117</td>
<td>0.151</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.369</td>
<td>0.212</td>
<td>1.000</td>
<td>0.048</td>
<td>0.116</td>
</tr>
<tr>
<td>LEV</td>
<td>-0.759</td>
<td>-0.117</td>
<td>0.048</td>
<td>1.000</td>
<td>0.287</td>
</tr>
<tr>
<td>MO</td>
<td>-0.599</td>
<td>0.151</td>
<td>0.116</td>
<td>0.287</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Based on the Table 4.2, the highest figure which is 0.287 is seen between leverage and executive equity incentives. However, it cannot be said that there is correlation between those two variables since the value is still far less than 0.95. Therefore, it can be concluded that there is no correlation between any of each independent variable in this study.

**Coefficient of Determination**

This test is aimed to show the ability of the regression model in explaining the dependent variables through independent variables (Ghozali, 2013:97). In logistic regression, the result will be determined by the value of Nagelkerke R Square, the value closer to 1 characterize the stronger influence of independent variable toward dependent variable (Ghozali, 2013:83). The complete presentation of the test is shown on Table 4.3.

In this study, the value of Nagelkerke R Square is 0.257. The figure defines that the dependent variable is only explained by 25.7% of the independent variable in this study. For the rest 74.3% is explained by any other variables which are not included in this study.

**Hosmer and Lemeshow’s Goodness of Fit Test**

Hosmer and Lemeshow Goodness of Fit Test is performed to see if the regression model suits the data or not. It hypothesizes that:

- H₀: the empirical data fit the model
- H₁: the empirical data does not fit the model

This test will be valued by its significance. H₀ is accepted if the statistical value of the test is more than 0.05. If the statistical value is less than or equal to 0.05 then there are significant differences between the models with its observations’ value so H₀ is rejected (Ghozali, 2011:341). The result of this particular test will be described in Table 4.4.
Table 4.
Hosmer and Lemeshow Test

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-Square</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.488</td>
<td>0.485</td>
</tr>
</tbody>
</table>

According to table 4.4, the statistical value of Hosmer and Lemeshow Test is 7.488 with the significance value of 0.485. Therefore, it is confirmed that the null hypothesis is accepted which means that the model suites the observations’ data.

Overall Model Fit Test

Ghozali (2011: 340) stated that If the value of \(-2\text{Log Likelihood} (\text{Block Number} = 0)\) before independent variables are inserted is greater than \(-2\text{Log Likelihood} (\text{Block Number} = 1)\), then the entire model shows a good regression. The more the model experiences a decline, then, the better the regression model will be. In this test, it is hypothesized that:

- \(H_0\): Model fit to the data
- \(H_1\): Model does not fit with the data

In this research, the value of \(-2\text{Log Likelihood}\) has been decreasing for 16.917 from the initial value of 141.402 to 124.485. The result indicates that the model is better when the independent variables are inserted so \(H_0\) is accepted. The values of this test is shown on table 4.5.

Table 5.
Iteration History\(^{a,b,c,d}\)

<table>
<thead>
<tr>
<th>Iteration</th>
<th>-2 Log likelihood</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Constant</td>
</tr>
<tr>
<td>1</td>
<td>124.485</td>
<td>-.038</td>
</tr>
<tr>
<td>2</td>
<td>120.205</td>
<td>-.318</td>
</tr>
<tr>
<td>3</td>
<td>119.596</td>
<td>-.493</td>
</tr>
<tr>
<td>4</td>
<td>119.585</td>
<td>-.511</td>
</tr>
<tr>
<td>5</td>
<td>119.585</td>
<td>-.512</td>
</tr>
<tr>
<td>6</td>
<td>119.585</td>
<td>-.512</td>
</tr>
</tbody>
</table>

Result of Logistic Regression

Logistic regression is employed to examine the effect of related party transactions, profitability, leverage, and executive equity incentives on the occurrence of accounting irregularities. An analysis using SPSS version 18.0 shows the output as follows:

\[
\ln \left( \frac{\text{Al}}{\text{Al-}} \right) = -0.512 + 2.574\text{RPT} + 4.177\text{ROA} - 1.385\text{LEV} + 0.611\text{MO} + e
\]

The model shows the value of constants is -0.512 which means that when the other variables are considered constant, the occurrence of accounting irregularities for non-financial companies during 2012 to 2014 will be in -0.512. Further, in an assumption that the other variables are constant, related party transaction (RPT) variable resulting a regression coefficient of 2.574 and significance value of 0.009 (<0.05). The figures signify a positive and significant association where firms with accounting irregularities exhibit relatively greater transaction with related-parties prior to the restatement announcement. The finding is in line with fraud triangle theory which considers related party as an opportunistic action to commit fraud. Therefore, \(H_{a1}\) is accepted. In profitability (ROA), the value of regression coefficient is 4.177 with significance value of 0.011. It specifies the positive and

<table>
<thead>
<tr>
<th>Variables in the Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
</tr>
<tr>
<td>RPT</td>
</tr>
<tr>
<td>ROA</td>
</tr>
<tr>
<td>LEV</td>
</tr>
<tr>
<td>MO</td>
</tr>
<tr>
<td>Constant</td>
</tr>
</tbody>
</table>

Accordingly, the logistic regression model is computed as follows:
significant relation with accounting irregularities. The result is consistent with hypothesis 2 \((H_a2)\), which predict that high profitability might come with probability of overstatement in regard to mitigate poor performance.

On the other hand, leverage \((LEV)\) variable shows a negative regression coefficient for \(-1.385\) and significance value of \(0.126\) which illustrate a negative association and its impact on accounting irregularities is not significant. Therefore, \(H_{a3}\) is rejected. Regardless of the non-significant statistical value, this result reinforce the theory of fraud triangle with the evidence of firms with accounting irregularities are shown to be exhibiting lower leverage ratio in the period prior to the restatement announcement. Variable executive equity incentive \((MO)\) shows regression coefficient value for \(0.611\) for its regression coefficient and significance value of \(0.195\). Although result indicates that the impact of executive equity incentive on accounting irregularities is not significant, the positive coefficient shows that firms with relatively high managerial ownership are more likely to commit accounting irregularities. This evidence points to a motive for why firms commit in accounting irregularities. Actions that overstate income, understate expenses or decrease tax liability, for example, would improve the bottom line and make this incentive based compensation more valuable (Elayan et al., 2009). This result is contradictive to the agency theory proposed by Jensen and Meckling (1976) which assumed that the granting of equity-based incentive may create profit-sharing and risk sharing mechanism, thus level of accounting irregularities may get reduced. Therefore, \(H_{a4}\) is rejected.

5. Conclusion

The present paper develops evidence to investigate the determinants of accounting irregularities in non-financial companies in Indonesia. Based on fraud triangle theory and agency theory, variable related party transaction \((RPT)\), ROA, leverage, and managerial ownership has been selected. The result suggests that related party transaction and profitability have a significant positive impact on accounting irregularities. Variable leverage and executive equity incentive exhibit a negative and positive association respectively, but the impact of both variables on accounting irregularities is found to be insignificant.

This evidence provides a new insights for the financial statement users, such as stockholders, potential investors and creditors in their decision making process. In determining the performance of the company, they should take into account the risk of overstatement, understatement, or any falsification in accounting done with a specific motive.

In addition, there are also some limitations of this study that the researchers would like to acknowledge. Firstly, this study uses only four independent variables, while actually there are still many other variables out there that might influence the occurrence of accounting irregularities. Secondly, this research is only based on secondary data, thus the information is somehow leading to the uncertainties in understanding the real setting of a phenomenon. And lastly, considering that accounting irregularities can arise from either error or fraud, this research is more focus on the occurrence of accounting irregularities related to the fraudulent financial reporting resulting in less attention to its association with error.

References


