The Influence of Corporate Risk-Taking on Accounting Conservatism with Compensation as Moderating

Maria Mediatrix Ratna Sari
Department of Accounting, Faculty of Economic and Business, University of Udayana, Bali, Indonesia

I Gde Ary Wirajaya
Department of Accounting, Faculty of Economic and Business, University of Udayana, Bali, Indonesia

Ni Luh Supadmi
Department of Accounting, Faculty of Economic and Business, University of Udayana, Bali, Indonesia

Abstract

The purpose of this study is to determine the influence of corporate risk-taking to accounting conservatism with compensation as a moderating. This study used purposive sampling with 50 corporates listed in Indonesia Stock Exchange in the period of 2012-2015. Moderated regression analysis is used to test the hypotheses. The results show that corporate risk-taking has negative effect on accounting conservatism, if the corporate risk-taking increases then the level of accounting conservatism is decreased. The compensation is strengthen the influence of corporate risk-taking on accounting conservatism. The higher the level of corporate risk-taking which is supported by the higher compensation has impact on the lower level of accounting conservatism.

Keywords: Corporate Risk-Taking, Accounting Conservatism, Compensation.

1. Introduction

The concept of conservatism reveal that in uncertain circumstances, the management will use the option in the accounting treatment to describe the situation which is less favorable. It has implications for the recognition of a loss in advance and do not immediately recognize the income or the possibility of corporate’s earnings in the future (Suwardjono, 2005: 245). Accounting conservatism is a concept in the corporate’s accounting practices by choosing a generally acceptable accounting method which is slowing the income recognition, accelerating recognition of the cost, lowering valuation of the assets, and raising the debt ratings (Wolk and Tearnney, 2001).

Penman and Zhang (2002) revealed that conservatism degrade the quality of earnings, while Narayanan and Mike (2005) found it better to leave the conservatism to show that financial statements are not biased. It is not consistent with the idea that the accounting conservatism is an option that is useful to show the growth of the corporate (Feltham and Ohlson, 1995) and to face the uncertainty (Hendriksen, 1982). The inconsistency shows the controversy from various stakeholders from the benefits of accounting conservatism.

Nevertheless, there is an increase in the use of conservatism in the corporates in United States (Basu, 1997; Givoly and Hayn, 2000) and Indonesia (Hadrat, 2005). Lara, Osma, and Penalva (2005) found that financial institutions prefer the numbers of conservative accounting are presented in the balance sheet. The corporate choose to be conservative in the long term (Qiang, 2003).

Jorion (2002:3) revealed that risk can lead to success or failure. The corporate has the option to be the risk-taking or risk averse. Risk should be monitored carefully because it can potentially create destruction. The practice of accounting conservatism can provide benefits in the face of internal risk corporates, such as the risk of decrease in operating cash flow in the future (Biddle, et al., 2011) and the risk of managers in the decision making to acquire the corporate at risk (Kravet, 2010) and to face the systematic risk of the corporate (Qi, 2011). These studies illustrate that risk has important role in the forming of agents reporting behavior.

MacCrimmon and Wehrung (1986) revealed that the increase in income levels has relationship with the increase of risk tolerance levels. Okun and Elias (1977) concluded that taking risk is a function of the payment structure. The relationship between principal and agent based contract revealed that the risk-averse agents will be reduced if the agent get higher compensation (Eisenhardt, 1989). The attitude of agent who takes risks will affect the behavior of managers reporting to be less cautious.

Qi (2011) found evidence that the corporate’s risk (unsystematic risk) does not affect accounting conservatism, it is different from the research of Biddle, et al. (2011), Kravet (2010), and Cain and McKeon (2011). Based on the previous statement, the main outline of this study is whether the effect of corporate risk-taking on accounting conservatism and whether compensation moderate the influence of corporate risk-taking on accounting conservatism.

The purpose of this study is to examine the influence of corporate risk-taking to accounting conservatism with compensation as moderating, in order to provide empirical evidence about the influence of corporate risk-taking to accounting conservatism with compensation as a moderating.
2. Literature Review and Hypothesis Development

Eisenhardt (1989) explained that in the case of agent behaviors are not observed, such as moral hazard or adverse selection, the principal makes a contract based on the agent’s behavior. If the uncertainty of the results is low, the cost of transferring the risk to the agent is also low, then the contract based on the results is interesting to do. When uncertainty increases, the cost of transferring the risk to the agent will be high even though the contract which is based on the results has motivational benefit. If the level of the risk rejection of the agent is high, then the cost of transferring the risk to the agent is expensive thus the principle tend to choose the contract based on the behavior. When the rejection toward the risk of the agent is low and the cost of transferring the risk to the agent is also low, then the contract based on the outcome is preferred by the principal. This theory assumes that the principal is risk-neutral, and the agent is averse of risk and effort. Agents and principals assumed to be motivated by their own interests and conflict interests often happen between them (Leslie and Kren, 1997).

Sterling (1970) revealed that conservatism is the principle which is most influential in accounting valuation. This principle is the standard of recording that are applied to compensate the management’s optimism that tends to declare excessively in the financial statements. The management realize that the operating earnings which presented in the financial statements contain information for the stakeholders, so that the size of the earnings will influence the decision which will be taken by various parties with different interests. Watts (2003) found that the use of accounting conservatism can provide benefits to corporates, such as restricting manager’s opportunistic behavior, increase the value of the corporate, reducing the potential of litigation, and obey the rules.

The risk-taking corporate is a corporate that is ready to face any consequences that may arise or experienced. Conversely, risk averse corporate is a corporate that is being conservative. Cain and McKeon (2011) revealed that the risk-taking corporate have a high level of leverage and fluctuation of stock returns and earnings, which indicates an uncertainty of results.

Compensation system for several people can be a motivation in doing their work (Robbins, 2001:193). Every individual tends to desire higher compensation to fit the jobs that have been done. Blume (1976) said that the increase in income is a common characteristic for individuals with a high risk tolerance. Cohn, et al. (1975) found that the investor risk tolerance relatively increase the wealth and income. Friedman (1974), Shaw (1996), Cicchetti and Dubin (1994) revealed that the risk tolerance varies systematically with income levels.

Qi (2011) examined the relationship between systematic risk and accounting conservatism. In corporates with high systematic risk, managers have a high initiative to postpone the recognition of bad news with the hope of good news in the future. The high systematic risk decrease the demand of conservatism from investors and auditors. Qi (2011) did not find the effect of unsystematic risk against conservatism. Kravet (2010) examined the effect of accounting conservatism and managerial risk-taking in the decision of making acquisitions. The results of the study explained that accounting conservatism is lowering managerial risk-taking. The accounting conservatism is increasing, while the decision to acquire the corporate at risk is decreasing.

Biddle, et al. (2011) examined the effect of accounting conservatism and risk reduction in operating cash flow. Unconditional and conditional accounting conservatism enlarge the cash holding and potentially increase it, as well as helping to reduce the risk of decline in operating cash flow. Unconditional and conditional conservatism reduce the bargaining power of consumers with risk reduction in operating cash flow. Conditional conservatism increases the use of hedging that lowers the risk reduction in operating cash flow, especially during the period after Sarbanes Oxley (SOX). Corporates with the fluctuation of stock prices and earnings will tend to present the aggressive reporting, which are risk-taking corporates. Conversely, risk averse corporates prefer the certainty of results that tend to use accounting conservatism. The high risk-taking corporates are receiving more uncertain circumstances with fluctuating results, while low risk-taking corporates are more in need of reassurance. Based on the above explanation, the formulation of research hypothesis as follows.

\[ H_1 \quad \text{: Corporate risk-taking has negative effect on accounting conservatism.} \]

Okun and Elias (1977) concluded that risk-taking is a function of the payment structure. Compensation is an income for the top managers’ services to manage the corporate. MacCrimmon and Wehrung (1986) suggested that individuals with higher earnings tend to take higher risk than individuals with lower earnings. Eisenhardt (1989) revealed that the agency theory can be used to describe the relationship between the principal and agent based on the difference in attitude to face the risk. The assumption is that the agent is risk-averse, while the principal is risk-neutral. The relationship between principal and agent based on compensation contract reveal that the agent’s risk-averse will be reduced if the agent obtain a higher compensation. The attitude of the risk-taking agent will influence the behavior of manager’s reporting to be less cautious, driven by the interest to get higher compensation. The amount of compensation is determined by the manager’s performance levels. The manager with low risk-taking will considers and anticipates all possibilities that will happen to face the uncertainty by applying conservative accounting. If the of manager’s performance is evaluated based on earnings that presented in the financial statements, the manager will seek to anticipates the presented earnings in order to improve his/her welfare. The manager is willing to take a higher risk because of the motivation in compensation’s increase, this led to the increasing of non-conservative reports. Based on the above explanation,
the formulation of research hypothesis as follows.

\[ H_2 \] : Compensation is moderating the influence of corporate risk-taking on accounting conservatism.

3. Research Methodology

The population of this study is all corporates listed in Indonesia Stock Exchange. The research sample will be selected using purposive sampling method. The defined criteria for representative sample in this study are as follows.

a. The manufacturing corporates listed in Indonesia Stock Exchange that publish annual financial statements in a row in the period of 2012-2015.
b. The corporates who have financial statements period are ended in 31st December and using Indonesian Rupiah as currency in reporting.
c. The corporates do not do all of activities as follows during the observation period: stop their activities on stock market, stop doing their operation and do not merge.

The data used in this study is the quantitative data, which is the data in the form of numbers and can be calculated. The sources of data in this study is secondary data. The data were collected using the method of documentation in the form of annual reports that obtained from the website of Indonesia Stock Exchange (www.idx.co.id).

The identification and measurement of variables in this study are as follows.

a. The dependent variable

The dependent variable in this study is accounting conservatism, which is a proxy to indicate how conservative are the corporates to choose the accounting methods, using the measurements of Givoly and Hayn (2000) with the following formula.

\[
AC_{\text{Acc}} = \frac{\text{Net income before extraordinary items+depreciation expense} - \text{Cash flows from operations}}{\text{Average total assets}} \quad \ldots \ldots \ldots \ldots \ldots (1)
\]

b. The independent variable

Corporate risk-taking explains that the corporates with risk-taking are reflected in the characteristics. The measurement of corporate risk-taking is using earnings volatility (Boubakri, et al., 2011) with the following formula.

\[
\text{Risk} = \frac{1}{T-1} \sum_{t=1}^{T} \left( \frac{E_{t,t} - \frac{1}{T} \sum_{t=1}^{T} E_{t,t}}{E_{t,t}} \right)^2 \quad \ldots \ldots \ldots \ldots \ldots (2)
\]

\[
E_{t,t} = \frac{EBIT_{t,t}}{Sales_{t,t}} \quad \ldots \ldots \ldots \ldots \ldots (3)
\]

Explanation:

E = Corporates Earnings

EBIT = Earnings before interest and taxes

c. The moderating variable

Compensation explains the amount of income received by the board of directors that will affect risk-taking behavior and reporting systems. Compensation is determined by the proportion of the board’s income that compared with the total salary expenses incurred by the corporate for each of reporting period (Grable, 1997).

Preliminary testing is required to analyze the model that based on simplifying assumptions. The testing as follows.

a. Normality test

Normality test is a test to determine whether in the regression model the dependent and independent variables are normal distributed or not. Testing the normality of distributed population data is using the Kolmogorov-Smirnov by comparing the cumulative distribution relative observations to theoretical cumulative distribution relative or expectation. Data population is said to be normally distributed if the coefficient of Asymp. Sig (2-tailed) is more than \( \alpha = 0.05 \) (Utama, 2008: 11).

b. Heteroscedasticity test

Heteroscedasticity test is a test to determine whether variables operated by own variants are same (homogeneous) or vice versa (heterogeneous). The Glejser method is used to detect the presence or absence of heteroscedasticity. This method is done by regressing the absolute value of the residuals with each independent variable. If none of the independent variables have significantly influence to the dependent variable, then there is no heteroscedasticity. A good regression model is homoscedasticity, which means there is no heteroscedasticity (Ghozali, 2012).

c. Autocorrelation test

Autocorrelation is the correlation of an observation in one variable that occurs between time or individual. Autocorrelation cases generally occur in the time series data, which means that the current conditions are affected by the past. The Durbin-Watson test is used to test the autocorrelation (Murniati et al; 2013, 55).
d. Multicollinearity test

Multicollinearity test is a test to determine whether the operated variables have more than one linear relationship. Multicollinearity can be observed from the value of tolerance or variance inflation factor (VIF). If the tolerance is more than 10% or VIF less than 10, then it can be said that there is no multicollinearity (Ghozali, 2012).

Moderation regression analysis is a particular application for multiple linear regression that contain the elements of multiplicative interaction of two or more independent variables in the regression equation (Ghozali, 2012). Hypothesis testing using the significance level of 0.05. Moderation regression model is formulated as follows.

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 + e \]  

Explanation:

- \( Y \) = Accounting conservatism
- \( \alpha \) = Constant
- \( X_1 \) = Corporate risk-taking
- \( X_2 \) = Compensation
- \( \beta_1 \) = Corporate risk-taking regression coefficient
- \( \beta_2 \) = Compensation regression coefficient
- \( \beta_3 \) = Moderation regression coefficient
- \( e \) = Error term

4. Result and Discussion

4.1 Result

Manufacturing corporations listed in the Indonesia Stock Exchange from 2012 to 2015 are 152 issuers. The results of sampling using purposive sampling method are 50 issuers. Sample observations in this study are 200 observations, with the explanation as presented in appendix 1.

The results of descriptive statistical are 200 observations (presented in appendix 2). Accounting conservatism with minimum value of 0,00, maximum value of 0,09 with average value of 0,0091 and standard deviation of 0,01808. Corporate risk-taking showed lowest value of 0,00, highest value of 0,04 with average value of 0,0023 and standard deviation of 0,00631. Compensation showed lowest value of 0,01, highest value of 0,66 with average value of 0,1117 and standard deviation of 0,09324. The interaction of corporate risk-taking and compensation showed the lowest value at 0,00, the highest value at 0,02 with average value of 0,0005 and standard deviation of 0,00202.

Normality test showed the value of Kolmogorov-Smirnov at 0,49 with significance of 0,97, more than \( \alpha = 0,05 \), which means that the residuals were normally distributed (appendix 3). Heteroscedasticity test results showed the significant value of 0,091 and standard deviation of 0,01808. Corporate risk-taking showed lowest value of 0,00, highest value of 0,04 with average value of 0,0023 and standard deviation of 0,00631. Compensation showed lowest value of 0,01, highest value of 0,66 with average value of 0,1117 and standard deviation of 0,09324. The interaction of corporate risk-taking and compensation showed the lowest value at 0,00, the highest value at 0,02 with average value of 0,0005 and standard deviation of 0,00202.

The regression test resulted regression equation as follows:

\[ AC = 0,012 - 0,982CRT - 0,027C + 4,297CRT*C + 0,002 \]  

Explanation:

- \( AC \) = Accounting conservatism
- \( CRT \) = Corporate risk-taking
- \( C \) = Compensation
- \( e \) = Error term

The constants of 0,012 revealed that if the independent variables (CRT and C) are considered constant, then the average level for accounting conservatism is 0,012. The CRT regression coefficient of -0,982 revealed that every increase of one unit accounting conservatism will increase corporate risk-taking by -0,982. The C regression coefficient of -0,027 revealed that every increase of one unit accounting conservatism will increase the compensation by -0,027. The interaction coefficient of CRT and C by 4,297 showed that every increase of one unit accounting conservatism will increase corporate risk-taking and compensation by 4,297.

The test results showed that the value of adjusted R2 is 0,073, which means a 7,3% variation of accounting conservatism level can be explained by the variation of level of corporate risk-taking and compensation as well as its interaction, while the remaining 92,7% is explained by other causes beyond the model (appendix 7). The results of feasibility test models showed that F value of 5,110 with probability of 0,002,
which is smaller than 0.05, mean that the regression model can be used to predict the level of accounting conservatism (AC), or it can be concluded that the level of corporate risk-taking (CRT) and compensation (C), as well as its interaction, jointly affect the level of accounting conservatism (appendix 7).

When α = 5%, the significance of corporate risk-taking is 0.019 (> 0.05) with variable coefficients of -0.982, which means that corporate risk-taking has negative effect on accounting conservatism. This means that if the corporate risk-taking increases, then the level of accounting conservatism is decreased. The significance of compensation is to 0.045 (> 0.05) with coefficients of -0.027, which means that the variable compensation has negative effect on accounting conservatism. This means that if the compensation increases, then the level of accounting conservatism is decreased.

4.2 Discussion

4.2.1 The effect of corporate risk-taking on accounting conservatism

Hypothesis testing results explained that the corporate risk-taking has negative effect on accounting conservatism, it shows that if the corporate risk-taking increases, then the level of accounting conservatism is decreased. The high risk-taking corporates are receiving more uncertain circumstances with fluctuating results, it will affect the managers’ reporting behavior that tend to be aggressive. The managers’ behavior in the low risk-taking corporates are tend to be conservative with their expectations of certainty for a longer period of time. These results are consistent with the research of Kravet (2010) and Biddle, et al. (2011), which revealed that accounting conservatism is lowering managerial risk-taking. When the level of accounting conservatism increases, the decision to accept the offers at risk will decrease.

4.2.2 Compensation is moderating the influence of corporate risk-taking on accounting conservatism

Hypothesis testing results explained that the compensation strengthen the influence of corporate risk-taking on accounting conservatism. The higher the level of corporate risk-taking that is followed by the higher compensation, then the level of accounting conservatism become lower. Leslie and Kren (1997) assumed that agents and principals are motivated by their own interests and both parties often have conflicting interests. In the case of agent behavior are not observed, such as moral hazard or adverse selection, principals tend to make contracts based on the results of agents’ behavior in order to anticipate their interest. Eisenhardt (1989) explained that there are different attitude in the face of risks between principals and agents, assuming that the agent is risk-averse, while the principal is risk-neutral. The relationship between principal and agent that based on compensation contract revealed that the risk-averse agents will be reduced if the agent obtain higher compensation. The attitude of risk-taking agent will affect the manager’s reporting behavior that tend to be aggressive, which is driven by his/her interests to get higher compensation by anticipating the presented earnings in order to improve their welfare. The manager is willing to take a higher risk because of the motivation in compensation’s increase, this led to the increasing of non-conservative reports.

5. Conclusion and Recommendation

5.1 Conclusion

Based on the results of hypothesis testing and discussion, can be concluded as follows.

a. Corporate risk-taking have negative effect on accounting conservatism, it shows that if the corporate risk-taking increases, then the level of accounting conservatism is decreased. The high risk-taking corporates are receiving more uncertain circumstances with fluctuating results, it will affect the managers’ reporting behavior that tend to be aggressive.

b. The compensation is strengthen the influence of corporate risk-taking on accounting conservatism. The higher the level of corporate risk-taking which is supported by the higher compensation has impact on the lower level of accounting conservatism.

5.2 Recommendation

Based on the above conclusions, can be given the following advice

a. The further researchers to consider the other sectors as an object of research, such as financial sector, in order to learn more about the behavior of managers reporting in the financial sector which is more risk-prone.

b. The further researchers to consider a longer range of observation time to observe the tendency of conservative accounting practice.

c. Investors and shareholders are expected to study and observe the tendency of managers reporting behavior, in order to consider the information presented and can be useful in financial decision making.

References


### Appendix 1

**Sample of the Study**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing corporates registered in Indonesia Stock Exchange in the period of 2012-2015</td>
<td>152</td>
</tr>
<tr>
<td>Manufacturing corporates that did not publish and consecutively the full annual financial statements in the period of 2012-2015</td>
<td>(28)</td>
</tr>
<tr>
<td>Manufacturing corporates that did not have the financial period ended on 31st December and use the currencies for reporting other than Indonesian Rupiah.</td>
<td>(26)</td>
</tr>
<tr>
<td>Manufacturing corporates that stop their activities, operations, and did merger during the observation period (IPO, delisting, moving sector).</td>
<td>(16)</td>
</tr>
<tr>
<td>Manufacturing corporates that did not disclose the required information (compensation of the Board of Directors)</td>
<td>(30)</td>
</tr>
<tr>
<td>Sample of the Study</td>
<td>52</td>
</tr>
<tr>
<td>Outlier data</td>
<td>2</td>
</tr>
<tr>
<td>The used sample</td>
<td>50</td>
</tr>
<tr>
<td>The observations sample during 2012-2015 (4 years)</td>
<td>200</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016

### Appendix 2

**Descriptive Statistics**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK</td>
<td>200</td>
<td>.00</td>
<td>.09</td>
<td>.0091</td>
<td>.01808</td>
</tr>
<tr>
<td>CRT</td>
<td>200</td>
<td>.00</td>
<td>.04</td>
<td>.0023</td>
<td>.00631</td>
</tr>
<tr>
<td>K</td>
<td>200</td>
<td>.01</td>
<td>.66</td>
<td>.1117</td>
<td>.09324</td>
</tr>
<tr>
<td>CRT_K</td>
<td>200</td>
<td>.00</td>
<td>.02</td>
<td>.0005</td>
<td>.00202</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016

### Appendix 3

**Normality Test Results**

<table>
<thead>
<tr>
<th>Normal Parameters(^{a,b})</th>
<th>N</th>
<th>Normal Parameters(^{a,b})</th>
<th>Standardized Residual</th>
<th>Absolute</th>
<th>Positive</th>
<th>Negative</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>.0000000</td>
<td>Std. Deviation</td>
<td>.83666003</td>
<td>.148</td>
<td>.134</td>
<td>-.148</td>
<td>.490</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.970</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016

### Appendix 4

**Heteroscedasticity Test Results**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.062</td>
<td>3</td>
<td>.021</td>
<td>.035</td>
<td>.990(^a)</td>
</tr>
<tr>
<td>Residual</td>
<td>4.062</td>
<td>7</td>
<td>.580</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.124</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016

### Appendix 5

**Autocorrelation Test Results**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.69(^a)</td>
<td>.073</td>
<td>.058</td>
<td>.01755</td>
<td>1.954</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016
### Appendix 6

#### Multicollinearity Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.012</td>
<td>.002</td>
<td></td>
<td>6.084</td>
<td>.000</td>
</tr>
<tr>
<td>CRT</td>
<td>-.982</td>
<td>.414</td>
<td>-.342</td>
<td>-2.374</td>
<td>.019</td>
</tr>
<tr>
<td>K</td>
<td>-.027</td>
<td>.013</td>
<td>-.140</td>
<td>-2.019</td>
<td>.045</td>
</tr>
<tr>
<td>CRT_K</td>
<td>4.297</td>
<td>1.293</td>
<td>.480</td>
<td>3.324</td>
<td>.001</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016

### Appendix 7

#### Coefficient of Determination

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.269</td>
<td>.073</td>
<td>.058</td>
<td>.01755</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016

### Appendix 8

#### Model Feasibility Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>.005</td>
<td>3</td>
<td>.002</td>
<td>5.110</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>.060</td>
<td>196</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>.065</td>
<td>199</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016

### Appendix 9

#### Hypothesis Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>.012</td>
<td>.002</td>
<td></td>
<td>6.084</td>
</tr>
<tr>
<td>CRT</td>
<td>-.982</td>
<td>.414</td>
<td>-.342</td>
<td>-2.374</td>
</tr>
<tr>
<td>C</td>
<td>-.027</td>
<td>.013</td>
<td>-.140</td>
<td>-2.019</td>
</tr>
<tr>
<td>CRT_C</td>
<td>4.297</td>
<td>1.293</td>
<td>.480</td>
<td>3.324</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2016