

# The Impact of Supply Chain Strategy on Real Earnings Quality and Market Added Value

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**Abstract** The previous researches concluded that, the investor had to pressure on management for improving the earning quality, because it related with predicting the future prospect with high accuracy. This paper presents the impact of applying the supply chain management on the cost management to optimize productivity and decreasing cost which will have a direct impact on the earnings. The supply chain policy has advantages in reducing out the cost of capital, so that this policy could be used as a moderated variables. This research used the moderated multiple regression by collecting all data on the listed company in industry manufacturing from 2015-2017. In calculating the market value, this research used the Model H (Two Stages Model of Growth) in predicting the estimated price, which had fulfilled the minimum tracking signals criteria. The statistical testing shown out the supply chain have the positive impact on real earnings quality and market added value, where the higher earnings quality have made the investors decision in estimating the future prospect precisely. The supply chain policy played a critical role in reducing out the pattern of opportunistic behavior, when is a pressure on management in having proclivity to improve the earnings quality. This empirical testing had pointed out that publication financial earnings had been implication of game theory. To support the game theory in publication financial performance, this research had provided a novelty in estimating investor's action by providing out the schema of investors perception and accounting information. The supply chain policy had proclivity to give a push on supply chain management in implementing earning management, because management effort in disseminate the positive signal.

**Keywords**— *Real Earnings Quality, Market Added-Value, Supply Chain Management.*

## 1. Introduction

The fluctuations of market prices in capital market reflects the investor's reaction on a supply chain policy, thereby it could make the management being prudent in decision making [1]. The investor's capability in detecting the earning quality in the company's performance during the publish period of financial statements was reflected

by fluctuation of market price, it known as concept of usefulness accounting information. It takes the strategic advantage for investor in calculating the expected rate of return, particularly monitoring the financing policy [2]. Prior research on relationships examines the performance effects of firm power, supply chain (SC) membership, and SCM competence, where power refers to the ability of one SC partner to influence the actions of another. The fluctuation of market price is an indicator for investors to make decisions about the prospect in the future that pointed out the ability of management to develop the existence of the company's strategies business unit [3].

In publishing the financial statements, the accounting allow some uses of accruals, [4], when the accounting standard given technical guideline fort the use of accruals. The using of accruals can influence investors' reactions and perceptions negatively, because of misleading of company performance. It related with estimating the company performance in future. By obtaining the high quality of earnings, it means the use of accruals at a low level, the higher accruals quality given and the positive influence on the perception of capital market players and reflect the actual company's performance. As the implication of agency theory, the management used the pattern of accruals in disseminating the company prospect in future, on the other side the investors monitored the management's performance by attaining the accounting information. In [5] emphasizes the conflict of interest could be leveled down, when the management had reached out the target of investment, so the investors can predict the future required return. It had been implication of asymmetric information.

The earnings management pointed out that, the use of accruals was grouped into the opportunistic motivation and efficiency [6]. The opportunistic behavior would encourages the management had proclivity to implement the window dressing practices in publishing financial report annually, it means the using of accruals was at high level. In

[7] found that the management has tendencies to cover up the pattern of earnings management, it reflected as an opportunistic behavior by using the high discretionary accruals. This indicator reflected the flexibility of management in determining accounting treatment, it had made a distortion or misleading indicators on the actual company performance [8]. The earnings management can be done with efficiency motivation through signaling and efficient contracting, where there has a communication process on estimating the company's prospect in future.

In implementing the earnings management practices in Indonesia, [9] concluded that the practice is the opportunistic and this chances to carry out such behavior has always been existence. [10] shows that the number of Indonesian companies which practice the profits management has increased in the last decade alongside with the average growth of the Indonesian capital market index value of 26.75% per year during period 2000-2016 based on the 2016 IDX annual report. In [11] stated that the level of complexity accounting provides the chances to strengthens the existence of opportunistic behavior, where behavior is always widely open.

The role of supply chain policy as a pattern of way of communication by sending signals between the investors and management, regarding about the company's future prospects [12]. In [13] pointed out that, a larger number of companies tend to run out the high yielded supply chain policy routinely and (Baker & Powell, 2015) pointed out that the dominant shareholder with majority proportion implement the same policy. The results of this empirical test were strengthened by [14] has shown that the supply chain policy was carried out to reduce agency conflict between the majority and the minority shareholders.

### 1.1 Problem Identification

Does real earnings quality has an influence on the future market value of the manufacturing industry company?

Does the supply chain policy moderate has the influence of real earnings quality on the future market value on the public manufacturing industry company?

### 1.2 Research Purposes

To analyze the influence of real earnings quality towards the future market value on the open manufacturing industry company.

To analyze the supply chain policy in moderating the influence of real earnings quality towards the future market value on the open manufacturing industry company.

## 2. Literature Reviews

### Agency Theory

Agency theory has explained about the separation between the management function by managers and the ownership function by shareholders in a company. In [15] explained that the relation of agency in the agency theory which companies are collection of contracts (nexus of contracts) between the owners of economic resources (principal) and managers (agents) who take care of the use and control of these resources. This could motivate the agents to try their best and present the accounting reports according to the principal's expectations, thereby it would increasing the principal's trust in the agent [16].

There has conflict interest of agents to maximize their well-being, by giving rise to agency costs. The Agency costs could be divided into the monitoring costs, bonding costs and residual losses. The monitoring costs is the costs was triggered and incurred by the principal to monitored the agent behavior, which is to measure, observe, and control the agent behavior.

The bonding costs is the costs who was took care by the agent to establish and adhere the mechanisms which guarantee that the agent will act accordance to the interests of the principal [5]. Furthermore, the residual loss is sacrifices in the form of reduced principal prosperity as a result of differences in agent decisions and principal decisions. Based on research [17] said that the differences in interests (the conflict of interest) was occur, when managers try to maximize the value of the company with external party funding, it causing the agency costs to use debt to increase in line with increasing debt.

### The Signal Theory

The basic of this theory is that management and shareholders do not have enough access to obtain the company information as the existence of asymmetry information. There has a critical information that is only controlled by the

management while the shareholders are unable to obtain this equivalent information. When the change in corporate's funding policy could contribute a significant influence on fluctuation of the company's value in future, this kind of information should be shared with shareholders. The evidence of management's responsibility is the ability to provide out a signal (signaling) to shareholders regarding the company's future prospects [18, 19].

The signal theory explained that the pattern of investor's decision making behavior on the prospects of the company in future. by receiving messages or signals sent from management. In reality the management has better information than investors, related to capital costs and risk levels [20]. The signal theory explained that the companies have the urge to provide the financial statement information to external parties. The driven factor of the company to provide information is because there has information asymmetry between the company and the investor and it because the company knows more about the future prospects than outsiders (investors and creditors) [21, 22]. The signaling Motivation has encourages the management to send a certain messages through the presentation of financial statements [23]. In compiling these figures there has an element the use of earnings management policies, where there has an influence of accruals towards the determining of profits.

### **Prior Research**

In [24] shows that the companies which done the real manipulation activity has the lower firm value than companies which do not, and prove that corporate governance is not capable to eliminate those opportunities chances. This policy could level down the earnings management practices.

In [25] showed that the companies which carry out the high manipulation activities, this would reduces the firm value, it reflects the low earnings quality. There has a negative investor perceptions toward the use of manipulation activity, when the management has tendency to decrease or increase the profits. This reflects that there is something biases on financial statement information, so it does not reflect the actual company's performance. The use of manipulation activity is to send messages to shareholders about the management' effort in developing out the company's existence in future.

In [26] shows that the use of manipulation activity was done by manipulate the transactions, so this could affects the corporate's earnings. The use of manipulation activity would reflects the chances for management in reporting profits, it is an implication of opportunities behavior.

In [27] shows that the real activity manipulation was implemented before the accruals had been done latterly as earnings management practices. The motive for using the high accruals and manipulation activities is to send out a good news for investor, where the management have been fulfilling the expected return. Practically, it is a bias in financial reporting, when the management have proclivity to conceal the failure of reaching out the target, because the misleading have the negative investor's perception. This same results was strengthened by [28]

In [29] found that the company management used to cover up the earnings management practices. By providing out the disclosure of funding policies and company's image, the management try to send out that the company had been on the right track as a good news.. This examines proved that the earnings management has a pattern of opportunistic behavior. The practice of corporate governance is aimed to reduce the opportunities behavior to implement the earnings management.

In [30] shown that the supply chain made a positive contribution on future prospects, whereas there is a positive investor perception of the use of a high level of accruals quality. When the companies are able to carry out this high yielded supply chain policy, it means the management has ability to fulfill the annual target, absolutely the report have the high earning quality. It is a positive news for investor in predicting the better future prospects, while the supply chain payout has been over the required return. By having the majority ownership, the management tends to run a supply chain, thereby driving up an increase in market value, where it can level down the internal conflict.

In [31] showed out that the supply chain policy could give an significant contribution on fluctuations of market prices positively, where this policy has leveled up the accruals quality. The supply chain had pushed management in publishing the accounting information, which have the low level of discretionary accruals and high level of earnings quality. The supply chain pay out ratio could reflect the high earnings quality, so that the

relationship between the dividend and required return becomes stronger (positively).

### Thinking Framework

The research framework was arranged as in Figure 2 as follows:

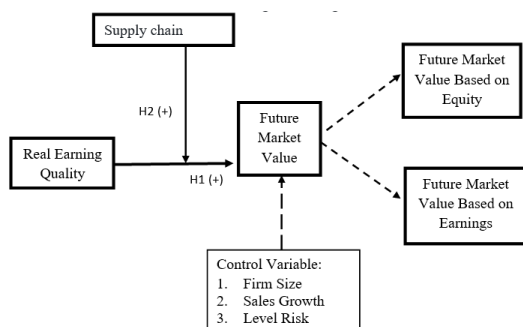


Figure 2. Conceptual Framework for Empirical Test Note: Arranged and processed based on the title and purpose of this research

### 3. The Development of The Hypothesis

By looking over previous research literature, the development number of hypotheses could be organized as follows:

#### Hypothesis Test with Real Manipulation Quality

By concerning the proxy of earnings quality, the high level of real earnings quality would reflected the higher accuracy of future market value predictions. It means this report has a minimum point of distortions information into financial reporting, This test was accordingly on equity values and income levels, with the following stages: [32]

The First Hypothesis: The Real Earnings Quality on Equity

The real earnings quality shows an increase on the accruals quality which recorded by the book value of company assets including a decrease which use of accruals. When the earnings quality is at high position, this accounting information have minimum manipulation activity and high real earnings quality. It means the high level of obedience on accounting standard, the management had implemented the accounting standard consequently. Therefore, the formulation of hypothesis can be arranged, as its follows:

H1a : Real earnings quality has a positive effect on future market value based on equity.

The Second Hypothesis: The Real Earnings Quality on Earnings

The real earnings quality reflects the company's ability to produce a targeted amount of profit, as

the expected by investor. This indicator pointed out that the higher value, the higher the earnings informativeness, including a positive contribution to the estimated achievement of future earnings. It means the high level real earnings quality give a valid information about actual corporate's earnings, it matches the accounting standard guideline. Therefore, the Hypothesis can be arranged as its follows:

H1b : Real earnings quality has a positive effect on future market value based on earnings.

Hypothesis Test by Moderation Real Earnings Quality and supply chain Policy.

By developing the H1 hypothesis, the statistical testing use the moderation between real earning quality with supply chain pay out ratio. This tests was carried out in two stages, as follows:

The First Hypothesis: Moderation The Real Earnings Quality and supply chain on Equity

The supply chain policy has a positive influence on management to level down the opportunistic behavior to calculate of asset values. The high real earnings quality shows the high management's compliance carries out accounting standards with a minimum bias, so that the recognition of investment values is carried out well, including positive investor perception on financing policy. By analyzing the actual asset value, the investor estimated the expected return in future, it related with the management's ability for attain the low cost of capital. Therefore, the hypothesis can be arranged, as follows:

H2a: supply chain policy reinforces the positive influence of real earnings quality on future market value based on equity.

The Second Hypothesis: Moderation The Real Earnings Quality and supply chain on Earnings

The supply chain policy would encourages the investor's involvement in predicting the future prospect, including the ability of management in developing the expansion planning. It related about the corporate strategic financing, particularly to obtain the low cost of capital. The indicators of the low real manipulation activity is the accounting information has the high real earnings quality, where has low misleading information, so it pave the investor to predict the future prospect with high accuracy. Therefore, thesis formulation of income level can be done as follows

H2b: supply chain policy reinforces the positive influence of real earnings quality on future market value based on earnings.

#### 4. Methodology

##### Population, Sample and Data Collection Model

This examined of population is a public company in the manufacturing industry at PT Bursa Efek Indonesia. This research been used purposive sampling, with criteria of research objects as follows [33]:

The company makes supply chain payments within the observation period.

The company has a positive average annual growth rate between the previous and subsequent periods.

This research period is in the period 2015-2017, but data is needed from 2011 to 2018. This type of research data is secondary data, obtained through ICMD (Indonesia Market Capital Directory) and the Indonesia Stock Exchange website ([www.idx.co.id](http://www.idx.co.id)).

##### Real Measurement of Manipulation Activity

This test used the real earnings manipulation activity whom detection based on [34] the research through three proxies in estimating real earnings manipulation activity. A number of proxies can be described, as follows: [35, 36].

##### First Proxy: Abnormal CFO.

The preparation of the multiple regression model is as follows:

$$\text{CFO}_t / \text{Asset } j, t-1 = \alpha_0 + \alpha_1 (1 / \text{Asset } j, t-1) + \alpha_2 (\text{Sales}_t / \text{Asset } j, t-1) + \alpha_3 (\Delta \text{Sales}_t / \text{Asset } j, t-1) + \epsilon_{j,t} \quad (1)$$

##### Second Proxy: Abnormal Discretionary Expenses.

The preparation of the multiple regression model is as follows:

$$\text{DISEXP } t / \text{Asset } j, t-1 = \alpha_0 + \alpha_1 (1 / \text{Asset } j, t-1) + \alpha_2 (\text{Sales}_t / \text{Asset } j, t-1) + \epsilon_{j,t} \quad (2)$$

##### Third Proxy: Abnormal Production Costs.

The preparation of the multiple regression model is as follows:

$$\text{PROD } t / \text{Asset } j, t-1 = \alpha_0 + \alpha_1 (1 / \text{Asset } j, t-1) + \alpha_2 (\text{Sales } j, t / \text{Asset } j, t-1) + \alpha_3 (\Delta \text{Sales } j, t / \text{Asset } j, t-1) + \epsilon_{j,t} \quad (3)$$

##### Information:

$\text{CFO}_{j,t}$  = abnormal CFO in company i period t was indicated by the estimated value  $\epsilon_{j,t}$  (error rate) in equation (z1).

$\text{DISEXP}_{j,t}$  = abnormal discretionary expenses in company i period t was indicated by the estimated value  $\epsilon_{j,t}$  (error rate) in equation (z2).

$\text{PROD}_{j,t}$  = production costs, i.e. cost of goods sold + change in company inventory j in year t was indicated by the estimated value  $\epsilon_{j,t}$  (error rate) in equation (z3). With the existence of residual error value in this proxy which has the opposite direction to the proxy of cash flow abnormalities and administrative costs [37].

Manipulation Activity j, t = was the sum of residual error values in the regression equation for abnormal cash flow, discretionary expenses and production costs in the company j period t indicated by the estimated value  $\epsilon_{j,t}$  (error rate).

The formula for real earnings quality can be done as follows:

$$[\epsilon_{j,t}(\text{CFO}_t / \text{Asset } j, t-1) + \epsilon_{j,t}(\text{DISEXP}_t / \text{Asset } j, t-1) - \epsilon_{j,t}(\text{PROD}_t / \text{Asset } j, t-1)] \times -1 \quad (4)$$

To measure the real earnings manipulation activity, it would organized as follows:

In calculating the earnings manipulation quality, this testing uses the sum of a number of absolute residual error from formula (aa), (ab), and (ac). It can be seen at formula (ad). Based on (Perotti & Wagenhofer, 2014), real earnings quality is earning manipulation activity multiplied by -1.

By obtaining the real earnings quality, it reflects that a management effort to minimize the manipulation activity as novelty in this research. This high earnings quality was used as a positive signal, the real earnings manipulation quality was in minimum point.

##### Future Market Value

To make understand easier the calculation of estimated market prices through the Life Cycle and Multistage Growth model [38-40], so it can be arranged as follows:

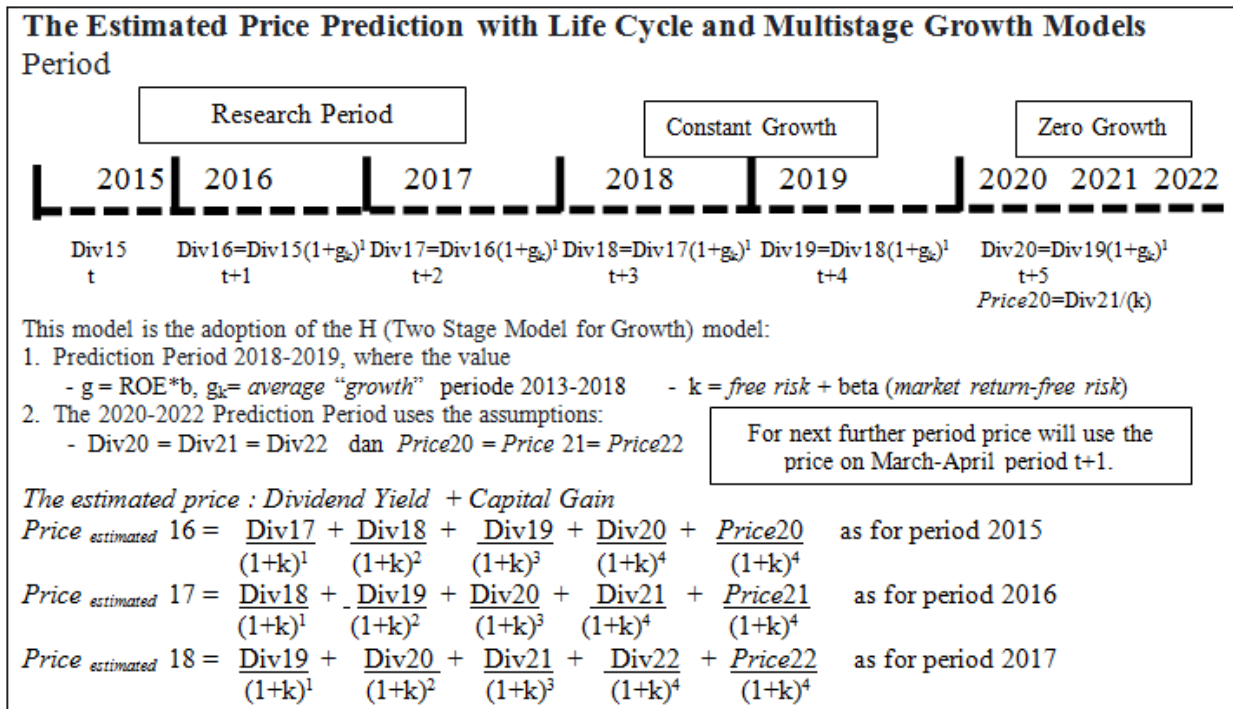


Figure 3. Stages of Estimated Market Price Calculation Period 2015-2017

The Presentation of the measurement of a number of variables in Table 1 as follows:

Table 1. Basis for Measurement of Research Variables

| Variable                                                                                      | Measurement Formula                                                                                                                                                                                                                                                                                                                                                                                         | Scale |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Dependent Variable by using the Future Market Value variable estimation indicator measurement | <i>The Estimated Price</i> <sub>t</sub> = $\frac{Div_{t+1}}{(1+k)^{t+1}} + \frac{Div_{t+2}}{(1+k)^{t+2}} + \dots + \frac{Div_{t+5}}{(1+k)^{t+5}} + \frac{Price_{tV}}{(1+k)^{t+5}}$<br><i>Future Market Value On Equity</i> = <i>Equity</i> <sub>t</sub> / <i>The Estimated Price</i> <sub>t+1</sub><br><i>Future Market Value On Earnings</i> = <i>Earnings</i> / <i>The Estimated Price</i> <sub>t+1</sub> | Ratio |
| <i>Real Manipulations Quality</i> = (ε <sub>j,t</sub> . <i>Real Manipulation</i> x -1)        | <i>Earnings Manipulation</i> = [ ε <sub>j,t</sub> (CFO/Asset <sub>j,t-1</sub> ) + ε <sub>j,t</sub> (DISEXP /Asset <sub>j,t-1</sub> ) - ε <sub>j,t</sub> (PROD /Asset <sub>j,t-1</sub> ) ]                                                                                                                                                                                                                   | Ratio |
| Moderation Variable using the supply chain Policy indicator                                   | Dividen <sub>t</sub> = $\frac{Dividen_t}{Net\ Income_{t-1}}$<br>Measurement of supply chain Policy for period t and Net Income for period t-1                                                                                                                                                                                                                                                               | Ratio |
| First Control Variable with Size                                                              | <i>Book Value</i> = <i>Value Total Asset</i> of on going period<br><i>Size</i> = $\log(Natural\ Book\ Value)$                                                                                                                                                                                                                                                                                               | Ratio |
| The Second Control Variable with Sales Growth Measurement ( <i>Sales's Growth</i> )           | SG <sub>t</sub> = $\frac{(Sales_t - Sales_{t-1})}{Sales_{(t-1)}}$<br>Delta Sales Growth (%) = Sales Value for the period t - Sales Value for the coming period                                                                                                                                                                                                                                              | Ratio |
| Third Control Variable with Risk ( <i>Debt To Equity Ratio</i> )                              | Total Debt = Short-term Debt + Long-term Debt<br>Then the formula was developed<br>Debt to Equity Ratio = Total Debt Value / Equity Value                                                                                                                                                                                                                                                                   | Ratio |

Source : The Compilation From Researcher

## 5. Research Result And Discussion

The Discussion of The Main Models

In Table 2 shows that the coefficient values of each regression model, as it follows :



Table 2. Main Model Regression Equation Coefficients

| Basis for Measurement of Independent Variables | <i>Future Market Value Based on Equity</i> |              | <i>Future Market Value Based on Earnings</i> |              |
|------------------------------------------------|--------------------------------------------|--------------|----------------------------------------------|--------------|
|                                                | Unstandardized Coefficient                 | Sig One Tail | Unstandardized Coefficient                   | Sig One Tail |
| Basis for Measurement of Dependent Variables   |                                            |              |                                              |              |
| 1. Unstandardized Coefficient                  | 0.01                                       | 0.87         | -0.106                                       | 0.449        |
| Dependent Variable                             |                                            |              |                                              |              |
| 2. <i>Real Manipulation Quality</i>            | 0.004                                      | 0.008        | 0.009                                        | 0.022        |
| 3. <i>Dividend Pay Out</i>                     | 0.064                                      | 0.009        | 0.208                                        | 0.034        |
| 4. <i>Real Manipulation Quality X DPR</i>      | 0.013                                      | 0.011        | 0.035                                        | 0.026        |
| Control Variable                               |                                            |              |                                              |              |
| 5. <i>Log Total Asset</i>                      | 0.006                                      | 0.022        | 0.028                                        | 0.016        |
| 6. <i>Growth Sales</i>                         | 0.001                                      | 0.01         | 0.023                                        | 0.011        |
| 7. <i>Risk</i>                                 | -0.129                                     | 0.024        | -0.245                                       | 0.021        |
| F Value Calculated                             | 4.152                                      |              | 4.029                                        |              |
| <i>Significant</i>                             | 0.504                                      |              | 0.504                                        |              |
| F Table                                        | 0.000                                      |              | 0.000                                        |              |
| <i>Adjusted R Square</i>                       | 0.110                                      |              | 0.107                                        |              |

Source: Secondary Data

DPRt = Dividend Pay Out Ratio

Sig One Tail=Sig/2

In Table 2 shows F Calculate > F Table (high significant) where the independent variables have a simultaneous influence on the dependent variable, so the main model has a high level of significance. This model meets the predictive modeling requirements

First: Real Earning Quality Against Future Market Value on Equity  $-0.010 + 0.004 \text{ REQ} + 0.064 \text{ Div} + 0.013 (\text{REQ} \times \text{Div}) + 0.006 \text{ Assets} + 0.001 \text{ Growth} - 0.129 \text{ Risk}$  (5)

In Table 2 the First Model shows that the statistical analysis as follows:

The variable of real manipulation accruals quality has a regression coefficient of 0.004 and a sig one tail value of 0.008 < 0.05, then the H1a is accepted. These results would reflect real manipulation accruals quality which has a positive effect on future market value based on equity.

The mediation result between the supply chain policy moderation and real manipulation quality on future market value on equity has a regression coefficient of 0.013 and a sig one tail value of 0.011 < 0.05, then the H2a is accepted. This result shows that supply chain policy strengthens the positive influence of real manipulation quality on future market value based on equity.

In first test of hypothesis shows that real earnings quality have positive regression coefficient on future market value on equity. When management have the maximum effort to minimum earnings manipulation, it means a minimum misleading information in accounting information, so give the positive contribution on fluctuation of market price in future. This research has proven the issue of

manipulation activity have a negative contribution on investor' perception. The high real earning quality has shown that the high level of management's obedience to carry out the accounting standard consequently, it related with agency cost in future. When infringement on accounting standard, it will carry out the high agency cost in future, it will have the negative investor's perception. This high real earnings quality helps investors to control how the management implement the strategic financing well, including estimating the firm value and assets in future period. Thus, the management tends to implement the low level of manipulation activity, so as to create out the high earnings quality, it sent out the good news. This research was strengthened by [41], by showing that the Indonesian companies who use the real earnings activity to increase the value of the company to send the desired message. This test also shows that the proxy of earnings quality has obtained a positive perception, because this is an attempt to reduce the behavior of opportunistic. By improving the quality of real earnings activity, the management give the sign that the high probability of better future prospects will happen.

The second hypothesis test shows that the supply chain policy was able to encourage management to reduce manipulation activity through strengthening positive relationships, when the coefficient of moderation results with supply chain is greater than the proxy coefficient of earnings quality itself. This test proved [42] research regarding the role of supply chain for estimating future prospects. The results of the supply chain policy has moderation

provide a positive effect on increasing real earning quality, including making a positive contribution to investors determining the expected rate of return in the coming period. The real earnings quality reflects that supply chain policy encourages the level of compliance with accounting standards, so that there is a high earnings quality, including the use of high real earning quality through low manipulation activity. Therefore, the dividends has encourage the supply chain management to record the asset values in which is actually in accordance with the principles of applicable accounting standards.

Second: The Supply Chain Policy Moderates the Real Earnings Quality and Future Market Added-Value On Earnings Future Market Added Value On Earnings=  $-0.106 + 0.009 \text{ REQ} + 0.208 \text{ Div} + 0.035 (\text{REQ} \times \text{Div}) + 0.028 \text{ Asset} - 0.023 \text{ Growth} - 0.245 \text{ Risk}$  (6)

Based on the table 3 those the 2 models has statistic Analysis as follows:

The real manipulation accruals quality variable has regression coefficient 0.009 also the sig one tall  $0.22 < 0.05$  so then the Hypothesis H1b was accepted. This results was reflected that the real manipulation accrual quality has a positive effect on future market value based on equity.

The mediation result between the supply chain policy moderation and real manipulation quality on future market value on earnings has a regression coefficient of 0.035 with sig one tail value of  $0.011 < 0.05$  so then the hypothesis H2b was accepted. This result shows that the supply chain policy has strengthen the real manipulation quality's positive influence towards future market value based on equity.

By looking over those first hypothesis, the real earnings quality has a significant positive effect on future market value on earnings, which have this same result with future market value on equity. When real earnings quality is in high position, it have shown out that the management has to implement the manipulation in minimum point, so that the financial statement reflects the actual corporate's earnings. It can be interpreted that management have the high confident to reach out the better prospect in future. This information could sent a signal "a good new" for investor about the corporate's ability in fulfilling the expected return. This research has proven the manipulation activity can influence negatively on the investor's perception, so that the improvement of real

earnings manipulation plays a critical role to boost up the investor's trust positively. The empirical testing has strengthen [43], that same pattern had been on behavior manipulation activities in South Korea. The actual corporate earnings pointed out that the high management's obedience the regional general accepted accounting standard in calculating the corporate's earnings, so it help the investor to determine the expected return, it means this financial report has been declared to have the high real earnings quality. The empirical testing concluded that the investor had given an appreciate on the management's effort for improving the accounting information' quality. When real earnings quality is in low position, it had been seen that management use subjective approach in reporting the corporate's earnings. Because of misleading accounting information, it make a difficulty for investors to predict the future with high accuracy. It means that the obedience is low, the implication is the high agency cost in future.

By looking over the second hypothesis shows that the supply chain policy is capable to encourage the management to improve the earnings quality, the results of this test proved [17] regarding the role of supply chain policy, especially in reducing the chances of opportunistic behavior. This supply chain policy encourages management to reduce the pattern of abnormal activity, so that it could increase the real earnings quality, the ability to predict the company's earnings in the further period, as well as the main test model. The supply chain policy would be able to contribute to estimating the future prospects and it also strengthening [21, 6] research regarding the role of supply chain as a communication channel.

### The Summary of Analysis Test

The examination on the main model has shown that there has the concept of decision usefulness information. And This test proved the previous research related to the quality of performance report as its follows:

In [39] shows that the investors react to accruals quality indicators and encourage management to improve earnings quality, which is an indicator of the level of consistency in using accruals. Positive perceptions of the high level of consistency, this is reinforced by [33]

In [8] point on the demands of investors for the provision of quality financial information from management. The Research shows that earnings



management variables are predictions of future company prospects.

In [21] show that the management tries to cover up earnings management practices, this test provides evidence that investors are able to detect the profits management, including demands for quality earnings information. This research has supported [15] which states that through investor pressure on management to improve the quality of using accruals.

In [4] shows that the earnings quality reflects the use of accruals, so investors are able to monitor the accounting record methods and decision making in patterns. The same thing was proven by [6] when high quality accruals can influence the positive movement of the market value of Indonesian companies. The Investors' attention was focused on the company's sustainability for the coming period. This result is reinforced by [32], where the use of accruals affects earnings determination.

This research proves that supply chain policy is an asymmetrical pattern of information through feedback of interaction patterns. The results of this test strengthen [28] on the role of supply chain to reduce the level of agency conflict (conflict of interest). Investors have the ability to distinguish companies that use low and high accruals, because attention is not only focused on achieving profits, but the level of business continuity. There is a tendency for management to cover the practice of opportunistic in providing a picture of expected performance, including the ability to meet the expected level of supply chain. This test proves that high-yield supply chain policy encourages the involvement of investors to improve monitoring of the company's operational policies.

The supply chain policy is able to encourage management to reduce opportunistic behavior, while the test proved that the management's efforts to meet the return on investment through the use of accruals. This test proves that supply chain policy has increases the quality of accruals. Thus, the results of this test was indicated that supply chain policy is a corporate policy, which contains asymmetric elements of information. Based on the statistical testing, this empirical research has proven the real earnings quality help the investor to predict the future prospect. It can be concluded that the feedback of interaction between investor and management, where both of them have the different view of point. This testing shown out the feedback of their

interaction is implication of asymmetric information, when the management had proclivity to run the high yielded dividend in reducing the intensity of internal conflict, in publishing the financial reporting, the relationship between investor and management proven the game theory.

To illustrate the game theory, this research use model decision tree to estimate the probability of implementing the supply chain policy. This model provides the mapping between corporate policy and investor reaction, which measured by future market value, it means a novelty variable for estimating the future prospect. The decision tree model in Figure 4 is arranged as follows:

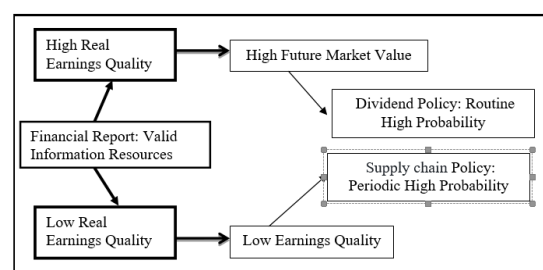


Figure 4. Model Decision Tree in Estimating the Probability of supply chain Policy.

In Figure 4 pointed out that investor have a main demand for high validity for accounting information to predict the future prospect with high accuracy, which represented by financial report as valid information resources in this figure. This area become a central point for regulator to create out a attractive incentive for management to implement the high financial reporting quality. This figure 4 gives some gist of guideline, like below:

When the financial report has been stated that the high earnings quality, which has the high real earnings quality and the obedience to carry out the standard accounting is in high level, so it can be predicted that the management have should run the supply chain policy consequently as a routine corporate finance. This estimated probability of the favor strategic event to obtain the low cost of capital is more than 60 %, so it declared a high probability as a good sign for better future prospect.. This management have good track to fulfill the expected required return.

When the financial report has been stated that the low earnings quality, which has the low real earnings quality and the obedience to carry out the standard accounting is in low level, so it can be predicted that the management have should run the supply chain policy periodic. Because of the



This research contributes to the Financial Services Authority (OJK) to prevent management for implementing the high yielded supply chain, because it contribute no advantages for company to developing the better prospect. This policy force management to adapt the supply chain policy with high growth, where this growth have been the higher rate that the sales earning growth.

### Research Limitations

This test uses a complex measurement of a constant growth rate with the calculation of the indicator growth (g) in the next 5 years period, including zero growth for predicting 2020-2022.

This test has secondary data abnormalities reflecting a very high level of variation in the use of accruals. As an implication of the data which is not normal, it causes the considerable data trimming through outlier tests. In this test, we trimmed 180 data from total samples 384.

### Recommendations for further research

To measuring earnings quality for future research, the researchers has suggest to use the approaches with probabilities, especially modeling the predictions of investor reactions to the quality of financial statements. Future models can be developed through the development of non-linear regression models.

In measuring the risk levels, the researchers realized all the number of limitations from the beta instruments to measures the risk levels. To measuring the risk for further research it could more comprehensive risk level calculation which can be used to estimate the company's ability to regained its existence for the long run.

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