Impact of Market Competition on Earnings Management in Accepted Companies Tehran Stock Exchange

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Abstract

The aim of this study was to evaluate the effect of product market competition on the management of discretionary accruals, the accruals-based management and real earnings management of listed companies on the Stock Exchange in Tehran. The sample consisted of 145 company during the period 1389 till 1393 the companies listed on stock selection and test hypotheses using panel data with the help of generalized least squares method, has been done.

The results of the study hypothesis, suggests that product market competition has a positive impact on positive discretionary accruals (increase of profit), but the impact of competition on the negative discretionary accruals as well as the absolute value of discretionary accruals not confirmed. The results also show a positive impact on the overall accrual is competition. The effects of competition in the management of real profits, the results suggest that competition for discretionary spending unusually negative effect on cash flow unusual and abnormal production costs had a positive effect.

Keywords: Accruals, concentration, competition, management of real profits.
1-1. **Introduction**

Many studies have shown that competition in the product market creates incentives for managers to maintain the best interests of shareholders. Recent research shows that competition, motivation and propensity of managers to manage earnings impact (Young, 2014). The main economic argument on the belief that competition in the market, an excellent mechanism for allocating resources and has a disciplinary effect on the behavior of managers and their incompetence. The different views of interest to researchers in relation to the type and direction of this relationship and how to influence the competitive structure of the firm's earnings management project and presented. Some claim that competition in the market can have a moderating effect on the earnings management incentives and somehow have to manage reported earnings. In contrast, others believe the role and the positive effect of competition on earnings management. In this regard, the present study aims to investigate and analyze competitive products and the effect on profit handled by the firm's managers.

In Iran, in the field of management of discretionary accruals lot of research has been done. For example, Moradzadeh person, Nazmi ardekani, slavery and arguable (1388) showed a significant negative relationship between the level of institutional ownership and earnings management there. Prayer, Bayezid and Jabbarzadeh Kngrlvyy (1390) found between earnings management and the auditor's tenure, there is a significant positive relationship, but there was no significant relationship between earnings management and auditor size. Hejazi, Mohammadi, Aslani and Aqajani (1391) found that variables discretionary accruals and non-profit management the previous period, the company's performance, size and continuity of profit, most relevant, but in the field of real activity manipulation, little research has been done is.

For example, Mojtabahdez and valizadeh Larijani (1389), the impact of earnings management through asset management activities of future returns and future operating cash flows examined. Although results showed that earnings management by managing the company's activities, Iranian companies can be used by managers, but there is no significant relationship between the variables studied.

B. Mashyekhi, S. Mehrani, K Mehran and Karami (1384), in a study titled The Role of discretionary accruals in earnings management tried to determine why the managers to manipulate earnings, profits and manage the consequences of this treatment. They would concluded that earnings management firm in the sample, while reducing cash flow from operations reflects the poor performance of the business unit, in order to compensate for this action to increase profits by increasing the discretionary accruals.

2. **Problem statement**

Rothenberg and Sharfastyn (1990) argue that there is a positive relationship between competition and profit management. They believe that their findings are consistent with the view that employment concerns of managers working in an environment of intense competition, forcing them to make profit management. Rice (2003) states that companies faced with economic pressures and competition in order to dissuade competitors will attempt to enter the industry.
One way to deal with these pressures, manipulations and earnings management is provide stable and reliable on the market.

Shleifer (2004) claims that competitive pressure in the market increases the possibility of manipulating interest in the company. This is due to the way he states that there is intense competition in the market, the managers manipulate earnings to influence potential investors influence the stock price and reporting through appropriate profit before education, are under pressure. On the other hand Markaryan and Snatalv [33], believes that if investors have enough information about the company's sales and efficiency, the competition may reduce the incentives to manage earnings.

A number of studies have shown that competition in the product market in terms of higher information asymmetry, makes the assessment of performance compared with rivals, it's easier to move, while managers in the interests of shareholders (Holm Strom, 1982; Hart, 1983 and the interface and Btygnyz, 2007). Accordingly, it is predicted that the negative relationship between the level of competition and profit management, exist.

1-5. Hypothesis

In this study, the main hypothesis and six sub-hypothesis is considered as follows:
1. Competition in the market has a significant impact on earnings management is commitment.
1-1. Competition in the product market have a significant impact on the absolute value of discretionary accruals.

1-2. Competition in the product market have a significant impact on positive discretionary accruals.
1-3. Competition in the product market have a significant impact on discretionary accruals is negative.
2. The product has a significant effect on earnings management is market competition.
3. Competition in the market has a significant impact on real earnings management.
3-1. Competition in the product market have a significant impact on earnings management based on cash flow is abnormal.
3-2. Competition in the product market have a significant impact on earnings management based on the cost of production is abnormal.
3-3. Competition in the product market have a significant impact on earnings management based on discretionary spending is unusual.

6. Research method

In this study, using historical information companies, to examine relationships between variables using linear regression and panel data will be discussed. The study population includes all companies listed on Tehran Stock Exchange within 5 years (from 1389 to 1393) is.
-7. The introduction of variables

Independent variable product market competition

Competition in the product market in terms of the Herfindahl-Hirschman (HHI) is calculated. In fact, the index is an inverse measure of product market competition and using equation (1-1) can be calculated. The higher the index indicates more focus and less competition in the industry, and vice versa.

\[ HHI = \sum_{i=1}^{k} S_i^2 \]  

(1-1)

\( S_i^2 \): Square market share of firm in through sales ratio of each company in a particular industry divided by the total sales achieved by the industry and \( K \) is the number of firms in the market. There are a large number of firms with equal share in the market, this indicator is close to zero. The Herfindahl-Hirschman industry was calculated for those classes that are at least 5 companies in the industry.

Dependent variable:
EMit: measure of earnings management, which includes the following criteria:

A. Discretionary accruals-based profit management
   - The absolute value of discretionary accruals (ABS_DAi, t)
   - Positive discretionary accruals (POS_DAi_t)
   - Negative discretionary accruals (NEG_DAi_t)

Discretionary accruals based on the residual error in the model of Kothari (2005) is calculated. The value of positive discretionary accruals, equal to the amount calculated in positive and negative, are considered to be zero. In contrast, negative discretionary accruals value, equal to the amount calculated in negative and positive, are considered to be zero.

B. The totality of accrual-based earnings management (EM_TAi, t)
   Based on the standard deviation of the residual error Mac version Nichols (2002) is calculated.

C. Real earnings management:
   - Abnormal levels of operating cash flow (R_CFOit)
   - Abnormal level of production costs (R_PRODit, t)
   - Abnormal levels of discretionary spending (R_DISC_EXPi, t)

Real earnings management based on the model residual error Chaudhry (2006) and Cohen and Zarvyn model (2010) is calculated.

Control variables

Previous studies indicate that features such as the Institute of Political costs (measured in terms of standard size) growth, net operating assets, leverage, systemic risk, audit firm size, profitability and market conditions could benefit management company and impact (bergamot and Associates, 2010; Cheng and Warfield, 2005; Krishnan, 2003; Dechow et al., 1995; Defund and GM Ball, 1994). The following control variables were used in this study:

Size: the natural logarithm of the stock market value
Growth: Measure growths in terms of market value to book value at the end of the fiscal year are calculated.

\[ NOA_{it} = \text{net operating assets}, \text{ according to equation (1-2) can be calculated:} \]
NOA = (Total assets - cash and investments) - (Total liabilities - current and long-term loans) 
(1-2) 
LEV\textsubscript{it}: Leverage is the ratio of long-term debt to total assets at the end of the financial year, can be calculated.
BETA\textsubscript{i,t}: Systemic risk, based on the variance covariance stock returns to market returns and market returns, can be calculated.
RM\textsubscript{t}: Market efficiency in this study using the index is calculated.
ROA\textsubscript{i,t}: Profitability is another control variables used in this study. Competition in the market to reduce the company’s profits and firms with lower profits is more likely to act earnings management.
BIG\textsubscript{i,t}: the size of the audit firm.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable name</th>
<th>Measure</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent</td>
<td>Earnings management criteria</td>
<td>Discretionary accruals:</td>
<td>The absolute value of discretionary accruals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The modified Jones model (1991)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>positive discretionary accruals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>negative discretionary accruals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Accruals</td>
<td>Mac Nichols (2002) version</td>
<td>(EM\textsubscript{T Ai, t})</td>
</tr>
<tr>
<td></td>
<td></td>
<td>abnormal of production costs</td>
<td>Cohen and Zarvyn (2010)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>abnormal of operantional expenditure</td>
<td>Cohen and Zarvyn (2010)</td>
</tr>
<tr>
<td>Independent</td>
<td>Product market</td>
<td>Competition</td>
<td>Herfindahl – Hirschman</td>
</tr>
<tr>
<td></td>
<td></td>
<td>size of the company</td>
<td>Logarithm of the market value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial Leverage</td>
<td>Long-term debt to assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>systematic Risk (Beta)</td>
<td>Variance covariance stock returns and market to market.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Market Returns</td>
<td>The difference between the end and beginning of the index, the total index</td>
</tr>
<tr>
<td></td>
<td></td>
<td>growth Criteria</td>
<td>Market value to book value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Profitability</td>
<td>Return on assets (profit to assets)</td>
</tr>
<tr>
<td></td>
<td>The size of the audit firm</td>
<td>Virtual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net Operating Assets</td>
<td>Operating assets - Operating liabilities</td>
<td></td>
</tr>
</tbody>
</table>

Table (1-1): A research variables

Testing hypotheses:

In this study, the effects of competition in the product market in terms of Herfindahl – Hirschman, measured on criteria including standards-based earnings management discretionary accruals (including absolute value accrual, discretionary accrual positive and negative
discretionary accruals), a measure based on the totality of accruals and real earnings management criteria, were studied.

4-5. Analysis model and test hypotheses

After calculating and analyzing utility models, variables required to develop the final model using the residual error of the first and third side models (model Kothari and Chaudhry on model) and the model residual error standard deviation (Mac version Nichols ) Calculated. In addition, after editing the final version, to estimate the pooled data of static and generalized least squares method was used.

Table (4-13): Descriptive statistics research data - the original model

<table>
<thead>
<tr>
<th>Variables</th>
<th>mean</th>
<th>Middle</th>
<th>Max</th>
<th>Minimum</th>
<th>Standard deviation</th>
<th>Skewness</th>
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<tr>
<td>ABS_DA</td>
<td>0/083</td>
<td>0/067</td>
<td>0/145</td>
<td>0/012</td>
<td>0/094</td>
<td>0/854</td>
</tr>
<tr>
<td>POS_DA</td>
<td>0/068</td>
<td>0/023</td>
<td>0/094</td>
<td>0/000</td>
<td>0/078</td>
<td>0/481</td>
</tr>
<tr>
<td>NEG_DA</td>
<td>0/052</td>
<td>-0/019</td>
<td>0/000</td>
<td>-0/094</td>
<td>0/035</td>
<td>-0/632</td>
</tr>
<tr>
<td>EM_TA</td>
<td>0/146</td>
<td>0/118</td>
<td>0/174</td>
<td>0/073</td>
<td>0/126</td>
<td>1/945</td>
</tr>
<tr>
<td>R_CFO</td>
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<td>0/012</td>
<td>0/328</td>
<td>-0/172</td>
<td>0/893</td>
<td>-0/073</td>
</tr>
<tr>
<td>R_PROD</td>
<td>0/035</td>
<td>0/021</td>
<td>0/048</td>
<td>-0/047</td>
<td>0/591</td>
<td>0/318</td>
</tr>
<tr>
<td>R_DISC_EXP</td>
<td>0/089</td>
<td>-0/097</td>
<td>0/027</td>
<td>-0/138</td>
<td>0/073</td>
<td>0/712</td>
</tr>
<tr>
<td>HHI</td>
<td>0/342</td>
<td>0/314</td>
<td>0/627</td>
<td>0/022</td>
<td>0/237</td>
<td>0/682</td>
</tr>
<tr>
<td>Size</td>
<td>0/482</td>
<td>12/526</td>
<td>17/537</td>
<td>9/536</td>
<td>1/612</td>
<td>0/671</td>
</tr>
<tr>
<td>Growth</td>
<td>2/853</td>
<td>2/482</td>
<td>15/738</td>
<td>0/893</td>
<td>0/834</td>
<td>0/823</td>
</tr>
<tr>
<td>NOA</td>
<td>0/623</td>
<td>0/578</td>
<td>0/782</td>
<td>0/412</td>
<td>0/412</td>
<td>1/341</td>
</tr>
<tr>
<td>LEV</td>
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<td>0/678</td>
<td>0/852</td>
<td>0/371</td>
<td>0/183</td>
<td>-0/361</td>
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<tr>
<td>BETA</td>
<td>0/983</td>
<td>0/823</td>
<td>3/634</td>
<td>-4/738</td>
<td>0/825</td>
<td>1/273</td>
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<td>RM</td>
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<td>0/356</td>
<td>-0/251</td>
<td>0/174</td>
<td>0/735</td>
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<tr>
<td>ROA</td>
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<td>0/152</td>
<td>0/327</td>
<td>-0/258</td>
<td>0/281</td>
<td>0/618</td>
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<tr>
<td>BG</td>
<td>0/283</td>
<td>0/251</td>
<td>1</td>
<td>0/000</td>
<td>0/386</td>
<td>1/218</td>
</tr>
</tbody>
</table>

Source: Calculations researcher

5.2. Classical assumptions search
A. Heterogeneity of variance test

To ensure the results of this study, to evaluate consistency in data combined variance method Bartlett (1983) used the same variance Shvd.drrvsh Bartlett, suppose the opposite hypothesis Shfrmbny Brhmsany variance heterogeneity of variance is considered topic. According to P-Value obtained, by using models, there EGLS problem of unequal variants and therefore null hypothesis of equality of variances will be accepted.

B. -Bvdn Normal test error terms (residual)

One of the most common tests used to assess the normality of residual error, Jarek - for-test (Jarque-Bera) or JB is short. If the residuals are normally distributed, the histogram should be meaningful JB Vamarh bell is not. This means that the p-value was calculated to be greater than
05/0 normality rather than the null hypothesis is rejected at 5% level (Badri and Abdul Baqi, 1389: 166).
Since the p-value for the test Jarek, greater than 05/0, thus H0 hypothesis of normality of the error terms in the model will be accepted.
C. Linear test variables

It is necessary to model the lack of alignment between the independent variables tested. For the presence or absence of a linear correlation between independent variables used in the analysis is that it is done by calculating the Pearson correlation coefficient. The results obtained showed high correlation between research variables that affect multiple regression analysis and there is, and therefore there is also a line between the variables.

a door. Test your lack of solidarity

The generalized least squares method, to study the problem of the first order autocorrelation test Watson camera is used (the test statistic to test the hypothesis in the context of relevant tables is presented).

3.3. Stability test

To ensure results and dummy variables to test the Vmny-Dar Drrgrsylvn lack of relationship stability was investigated Calculation Vahdtghyrhay root. Test method Levin, Lin and Chu (2002), we test, flying Vshyn (2003) unit root test Fisher - Dickey Fuller unit root test and Fisher - Philips Perron (1994) was performed. The unit root test unit root null hypothesis suggests that if the probability is smaller than 05/0 to 95 percent of the null hypothesis is not accepted. The results of stability tests show that the variables are all viable methods. According to the results, the null hypothesis of a unit root variable will not be accepted.

4-4. Tests of the model forecasts

In order to determine the type of model used in data compilation, various tests are designed. If the aim of selecting an appropriate model of fixed effects and random effects models, you can use a test called the Hausman test. Choose between the pooled regression and fixed effects model often used the Chow test.

4.1. Chow test (F Limer)

Chow introduced a test to choose between the two pooled regression model (Pooled) and fixed effects model was used.

4-4-2. Hausman test

For comparison, fixed effects and random – effects models in terms of explanatory power, used the Hausman test the null hypothesis of Hausman test, the suitability of the random effects model to estimate the regression model and the null hypothesis , the fixed effects model is confirmed. The results of the Hausman test given that the probability of the test statistic is less than 05/0, the null hypothesis is rejected and the fixed effects model was confirmed.
-5. The main research model coefficients
4-5-1. The main hypothesis of the first test

The main hypothesis of the first three sub-hypothesis that the effect of product market competition on earnings management’s commitment:

A. The first sub-hypothesis test variables: the absolute value of discretionary accruals
First hypothesis: the product has a significant effect on competition in the market is the absolute value of discretionary accruals.

The results of the first sub-hypothesis test using EGLS in Table (4-20) is presented. As the results show; P-value calculated for independent focus on product market (competition) level of 5 percent, not significant (first sub-hypothesis disapproval). Results in Table (4-20) also shows that the coefficient of determination adjusted sub-prime model to test hypotheses about 26 percent. This figure indicates that 26% of the dependent variable (the absolute value of discretionary accruals) by explanatory variables, explained. Finally, Durbin - Watson showed a lack of first-order autocorrelation of the errors.

| Model 1 : ABS_DA i,t= β 0 + β 1 HHI i,t + β 2 SIZE i,t + β 3 Growth i,t + B 4 ROA i,t + β 5 BETA i,t + β 6 BIG i,t + β 7 RM i,t + β 8 ROA i,t + e i,t |
|---|---|---|---|---|---|
| Variable | Estimated coefficient | standard error | T-statistics | P-value | P-value |
| C | 0/116 | 0/045 | 6/652 | 0/000 |
| HHI i,t | -0/038 | 0/015 | -1/613 | 0/107 |
| SIZE i,t | -0/023 | 0/047 | -5/683 | 0/000 |
| Growth i,t | -0/083 | 0/113 | -4/724 | 0/000 |
| NOA i,t | -0/041 | 0/208 | -3/475 | 0/000 |
| LEV i,t | -0/018 | 0/006 | -1/457 | 0/145 |
| BETA i,t | -0/031 | 0/076 | -4/216 | 0/000 |
| BIG i,t | -0/211 | 0/012 | -4/581 | 0/000 |
| RM i,t | -0/003 | 0/018 | -1/727 | 0/085 |
| ROA i,t | -0/012 | 0/023 | -1/498 | 0/135 |

F-statistic: 58/293 (0.000)

The coefficient of determination: 0/284

Adjusted coefficient of determination: 0/259

Source: Calculations researcher

Additional variable testing (Redundant Variable)
With this test can be used to examine the hypothesis of whether there are additional variables in the model that can be removed and re-estimated equation with less explanatory variables. The null hypothesis of this test is to remove the extra variable, is justified. The results are as follows, removing variables that were not statistically significant, did not approve.

B. Second hypothesis test variables: positive discretionary accruals
The second hypothesis product has a significant effect on competition in the market is positive discretionary accruals.

The results of the second sub-hypothesis test using the output of the model are presented EGLS. The results show that the P-value calculated for independent focus on product market (competition) is significant at 95% confidence level. The negative coefficient varies according to HHI can be concluded that increasing the focus variable product market (reducing competition), positive discretionary accruals (as one of the evaluation criteria accrual-based earnings management) decreases, and vice versa (Done the second hypothesis).

Adjusted factor model to test the second hypothesis suggests that a 32 percent change of the dependent variable (positive discretionary accruals) by explanatory variables, explained. Finally, Durbin-Watson absence of first order autocorrelation between errors is shown.

Additional variable testing (Redundant Variable)

The results of additional variables, delete variables and return on assets does not approve of market efficiency.

C. The third sub-hypothesis test variables: negative discretionary accruals

The third sub-hypothesis product market competition has a significant effect on discretionary accruals is negative.

The results of the third sub-hypothesis test were analyzed using EGLS. As the results show; P-value calculated for independent focus on market product market (competition) is not significant at 95% confidence level. So it can be concluded that the variable product market competition and negative discretionary accruals (discretionary accruals reducing profit) There is no significant relationship (no approved third hypothesis). However, at a confidence level of 90% can be claimed that the concentration of sales (increased competition) could lead to a reduction in discretionary accruals are reducing profit. The results also show that the coefficient of determination adjusted models to test the third hypothesis is 0.23. This figure indicates that 23% of the dependent variable (negative discretionary accruals) by explanatory variables, explained. Finally, the absence of autocorrelation Watson statistic camera first shows the errors.

5.2. The second major hypothesis testing

The second key assumption is the effect of product market competition on earnings management. The main hypothesis of the second test - the dependent variable: earnings management (based on total accruals).

The results of the second main hypothesis testing using EGLS in Table (4-25) is presented. As the results show; P-value calculated for independent variable focus on product market (competition), at 95 percent is significant. Accordingly, it can be claimed that between the
variable and variable profit was higher management of accruals there is a significant relationship (the original second hypothesis). At the same time negative factor variable HHI show that with increasing concentration in the market (or a decrease in competition) the level of accruals (as an indicator of earnings management) is reduced. Watson statistic camera as well as a lack of first-order autocorrelation between errors shows.

At the same time result in Table (4-25) shows that the coefficient of determination adjusted models to test the second hypothesis is 34/0. This figure indicates that 34% of the dependent variable by explanatory variables, explained.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated coefficient</th>
<th>standard error</th>
<th>T-statistics</th>
<th>P-value</th>
<th>P-value</th>
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<tr>
<td>C</td>
<td>0/017</td>
<td>0/063</td>
<td>4/723</td>
<td>0/000</td>
<td></td>
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<tr>
<td>HHI</td>
<td>-0/011</td>
<td>0/04</td>
<td>-3/012</td>
<td>0/003</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-0/029</td>
<td>0/035</td>
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<td>0/037</td>
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<td>0/017</td>
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<td>LEV</td>
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<td>-3/287</td>
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<td>RM</td>
<td>0/113</td>
<td>0/104</td>
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<td></td>
</tr>
<tr>
<td>ROA</td>
<td>0/127</td>
<td>0/203</td>
<td>1/554</td>
<td>0/120</td>
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</tr>
</tbody>
</table>

F-statistic 63/083 (0.000) The coefficient of determination 0/362
Durbin - Watson 1/816 Adjusted coefficient of 0/345

Additional variable testing (Redundant Variable)
the results of additional variables, delete variables does not endorse leverage and return on assets.

4.5.3. The third main theory test
the main hypothesis is the third of three sub-hypothesis that the effect of product market competition on real earnings management is investigated.
A. The first sub-hypothesis test variables: earnings management, cash-flow anomalous First hypothesis: competition in the product market have a significant impact on earnings management is based on cash flows is unusual.
The results of the first sub-hypothesis test were analyzed using EGLS. As the results show that the independent variable coefficient focus on product market was negative and the calculated P-value for the variable is significant at 95% confidence level. So it can be concluded that the increased focus on product market (reducing competition), Cash Flow unusual (as a measure of management's assessment of real profits) decreases (first sub-hypothesis). Test results show that the coefficient of determination adjusted models to test the first hypothesis is 26/0.
This figure indicates that 26% of the dependent variable (unusual cash flow) by the explanatory variables, explained. Finally, the absence of autocorrelation Watson statistic camera first shows the errors.

B. The second sub-hypothesis test - the dependent variable levels of abnormal production costs

The second hypothesis: competition in the product market has a significant impact on earnings management based on the cost of production is abnormal. The results of the second sub-hypothesis test using EGLS method have been checked. As the results show that the independent variable coefficient focus on product market was negative and the calculated P-value for the variable is significant at 95% confidence level. So it can be concluded that the focus variable product market and cash flow anomalies (as a measure of management's assessment of real profits) there is a significant negative relationship. In other words, reduce or increase the level of competition, the unusual level of production costs is added (sub-second hypothesis).

Adjusted results of the analysis showed that the factor model to test the hypothesis is 22/0. This figure indicates that 22% of the dependent variable (abnormal level of production costs) by the explanatory variables, explained. Finally, the absence of autocorrelation Watson statistic camera first shows the errors.

Additional variable testing (Redundant Variable) the results of additional variables (ROA), return on assets and confirms the deletion variable.

C. The third sub-hypothesis test - the dependent variable: Abnormal levels of discretionary spending

The third sub-hypothesis: competition in the product market have a significant impact on earnings management based on discretionary spending is unusual.

The results of the third sub-hypothesis test using EGLS method are presented. As the results show that the independent variable coefficient focus on product market is positive and the calculated P-value for the variable is significant at 95% confidence level.

So it can be concluded that the focus variable product market and cash flow anomalies (as a measure of management's assessment of real profits) there is a significant positive relationship. In other words, reduce or increase the level of competition, the unusual level of discretionary spending, reduced (third sub-hypothesis).

The results also show that the coefficient of determination adjusted models to test the third hypothesis is 18/0. This figure indicates that 18% of the dependent variable (abnormal level of discretionary spending) by the explanatory variables, explained. Finally, the absence of autocorrelation Watson statistic camera first shows the errors.

4-6. Summary test hypotheses
3. Findings

The main hypothesis of the effect of product market competition on accrual earnings management by using Kothari (2005) is dealt with. Hypothesis consists of three sub-hypothesis that the effect of competition on the absolute value of discretionary accruals, discretionary accruals positive and negative discretionary accruals are paid. The results of the regression of the absolute value of discretionary accruals on sales concentration index shows no significant relationship between the variables and the absolute value of discretionary accruals, there is no competition. While positive discretionary accruals regression analysis on the concentration index, which shows the relationship between the two variables, is negative, with declining sales focus, positive, or accruals accruals increased profits, increased. The regression results are negative discretionary accruals on sales focus indicator indicates there is a significant relationship at 95 percent.

The second hypothesis research plans without separation accruals discretionary and non-discretionary, to examine the issue of whether competition in the market of accrual-based earnings management product could affect. The results of hypothesis tests based on the Mac version Nichols (2002), show that in terms of statistically significant negative correlation between the concentration of sales and total accruals at 95 percent there. (The second major hypothesis).

The third main theory, the effect of product market competition focuses on real earnings management metrics. It consists of three sub-hypothesis is the hypothesis that the effect of product market competition on real earnings management metrics such as cash flow unusual, abnormal production costs and discretionary spending unusual, will be studied. The results of testing show that the relationship between the concentration of sales with negative cash flow unusual and abnormal discretionary expenses and the cost of production is unusually positive.
On the other hand managers can through discretionary spending (research and development or maintenance), cost reduction and profit increase reported. This approach is more likely that such costs will not immediately generate income. Hence, reduce or increase competition, expect companies to improve their profitability in a competitive, not to reduce their discretionary spending.

The role of competition in the product market liquidity will be explained a bit more complex and different activities can be counterproductive, and a different management of real benefit to the current period's cash flow. For example, optional fees, which may include capital expenditures as well, if not cash, to reduce these costs, less cash out of the company, which has a positive impact on operating cash flow. On the other hand overproduction fixed at the level of sales, cash flow will reduce the current period. Therefore, cash flows unusual relationship focused sales can be positive or negative. In this study, the results show that reduce or increase competition leads to an increase in cash flow is abnormal.

4.2. Suggestions for future research

1. Effect of focusing on sales and profits such as the level of competition on other features, stability and smoothing, the earnings forecast, earnings response coefficient, related to shares (Relevance Value) and its qualitative characteristics such as relevance and reliability.
2. The use of other effective measures on the competitive structure of the market, including market size, the number of firms in the market, the ability to replace products or standard criteria such as Lerner and Lerner adjustment and its effect on earnings management.
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