Market Competition, Customer Concentration, Company Diversification, and Earnings Quality: Does Integrated Reporting Matter in an Emerging Market?

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Abstract
Objective – This study investigates the association between market competition, customer concentration, corporate diversification, and earnings quality and the role of integrated reporting in moderating these effects within Indonesia's emerging economy.

Design/methodology – This study employs secondary data from the company's annual reports and financial statements available at www.idx.co.id and the company website. The sample used in this study is 121 manufacturing companies listed on the Indonesian Stock Exchange from 2016 to 2020, which were selected through the purposive sampling method so that 605 observations were obtained. This study engages two-panel data regression models.

Results – The results suggest that market competition is negatively associated with earnings quality, while customer concentration and corporate diversification are not associated with earnings quality. Furthermore, integrated reporting strengthens the negative effect of corporate diversification on earnings quality. Meanwhile, integrated reporting fails to moderate the impact of market competition and customer concentration on earnings quality.

Research limitations/implications – Measuring the integrated reporting index score based on the company's annual report, which follows the proxy adopted from the IR reporting framework. No other party has been able to confirm the index results, so the assessment is subjective.

Novelty/Originality – This study combines the three variables in the context of a company's competitive strategy, which has rarely been conducted, especially in Indonesia. Also, this study employs different proxies, such as the customer concentration proxy referring to Abbasi (2020), Crawford et al. (2020), Deng and Yan (2019), and Kim (2021), in contrast to Aryotama and Firmansyah (2019) who tested tax aggressiveness in Indonesia.

Keywords: Corporate Diversification, Customer Concentration, Integrated Reporting, Earnings Quality, Market Competition

1. Introduction
Earnings quality is a crucial indicator of information in financial statements that affect the efficient allocation of resources and evaluation of company performance (Nußmann, 2018). The issue of earnings management is a global phenomenon that has existed since the 20th century and is still ongoing today. In the early 21st century, Enron (Deil, 2014) and Worldcom (Kennon, 2020) were embroiled in a financial statement fraud scandal. In the last ten years, Toshiba has been proven to have carried out unjustified earnings management actions and accounting practices (Carpenter, 2021).
The latest issue derives from a Chinese company, Luckin Coffee, which falsifies revenue (Wang & Campbell, 2020). The earnings management case has also existed for a long time in Indonesia. In 2002, PT Kimia Farma inflated profits in its financial statements (Sulistiawan et al., 2011). The issue of earnings information became popular again after the emergence of an earnings management scandal by BUMN, namely PT Garuda Indonesia (Persero), in 2018, which carried out earnings management practices in the form of initial revenue recognition (Hartomo, 2019). The latest issue involved PT Hanson International Tbk in 2020, which was proven to have manipulated the presentation of financial statements (Idris, 2020). This earnings management practice is likely to continue if there are differences in objectives between interested parties such as management and shareholders.

The issues above illustrate that earnings management practices have existed for a long time and still exist globally. Earnings information presented by the company is an important matter for external parties such as investors and creditors but is risky because the reporting party, namely management, has different interests. Based on agency theory, managers' interests differ from those of shareholders. These interest differences lead to less-than-optimal management decisions (Yimenu & Surur, 2019). If the manager is closely influenced by discretion in controlling earnings, the information presented will be less quality. As a result, information users will make decision-making mistakes.

Earnings management is influenced by the relationship between management as agent and shareholders as principal in the employment contract relationship, as Scott (2015) referred to as agency theory. Agency theory often relies on company profits because a manager who prepares financial statements can manage earnings to make the company's performance suitable for the users. It will impact earnings information that does not show actual conditions or is biased so that the quality of earnings generated by the company becomes low (Sutopo, 2012). Based on agency theory, managers' interests differ from those of shareholders. These interest differences lead to less-than-optimal management decisions (Yimenu & Surur, 2019). If the manager is closely influenced by discretion in controlling earnings, the information presented will be less quality. As a result, the users will make decision-making mistakes. In fact, in the Statement of Financial Accounting Standards (PSAK) 1 regarding the presentation of financial statements, it is stated that the information contained in the financial statements should be able to help users to predict cash flows and evaluate the performance of the entity, which is then used in making decisions.

Low earnings quality will reduce management's ability to convey information to the market and leads to decrease stock prices. The manager has an accrual policy in influencing the numbers in the financial statements (Scott, 2015). This policy causes managers to use choices in financial accounting standards that can meet the interests of managers (Scott, 2015). As a result, the financial information managers present in financial statements may not necessarily reflect the true financial condition of the company (Prakosa et al., 2022). Shareholders, as company owners, only recognize the financial condition based on published financial statements (Prakosa et al., 2022). The existence of asymmetric information causes the information used in decision-making by shareholders to be biased (Amin & Firmansyah, 2023). In addition, earnings information that should be able to describe the company's performance becomes less useful for shareholders. Therefore, the review of earnings management needs further investigation.

A company's earnings quality is related to the activities or strategies managers use in running their businesses. Market competition, customer concentration, and company diversification show the competitive conditions and strategies that the company does. From the market side, high market competition will worsen the company's earnings quality (Guo et al., 2015; Lemma et al., 2018; Shi et al., 2018; Xing et al., 2018). The high level of competition causes pressure on managers to beat
competitors in the same industry to carry out earnings management, reducing earnings quality (Lemma et al., 2018). Companies also tend to reduce the volatility of their cash flows by performing earnings management (Xing et al., 2018). In addition, managers avoid proprietary costs and the takeover risk of disclosing earnings information (Guo et al., 2015), making managers obscure their earnings. In Indonesia, Sulistiawan and Rudiawarni (2019) stated that companies with low industrial competition would improve earnings quality, while Marciukaityte and Park (2011), using the U.S. census of manufacturers, noted that companies in competitive markets avoid earnings management because it will have a more significant impact on the company if the market finds out. The inconsistency of the results of previous research has resulted in a test of market competition on the quality of earnings that needs to be conducted.

From the customer side, companies with a high concentration of customers tend to carry out earnings management to reduce earnings quality (Deng & Yan, 2019). Concentrated customers can quickly obtain company information (Crawford et al., 2020). However, based on agency theory, the existence of information asymmetry causes the activities of managers to be completely unknown to outsiders. Companies with concentrated customers intend to increase their revenue to maintain customer relationships, especially when customers are responsible for a large part of total sales. Deng & Yan (2019) stated that companies are involved in real earnings management in companies with high customer concentration, while Kim (2021) stated otherwise. Research related to customer concentration, earnings quality, and management is still rare in Indonesia and emerging markets. Thus, it is necessary to examine customer concentration on earnings quality using company data in Indonesia.

In terms of strategy, diversified companies tend to have low earnings quality because managers manage earnings (El Mehdi & Seboui, 2011; Lim et al., 2008). The complex nature of diversification can worsen earnings quality or even lead to more agency problems (Demirkan et al., 2012). Managers diversify companies for their benefit (Aryotama & Firmansyah, 2019). Therefore, diversification motivates managers to manipulate accounting numbers and create favorable conditions, making it challenging to detect earnings management (El Mehdi & Seboui, 2011). Managers in diversified companies are less supervised and tend to make less than optimal decisions. These conditions increase discretionary costs (Farooqi et al., 2014). However, other studies, such as Masud et al. (2017) and Nußmann (2018), suggested high earnings quality in diversified companies. Kurniawati (2020) concluded that company diversification causes managers to be more aggressive in reporting company financial statements, while Dimarcia & Krisnadewi (2016) found the opposite. The inconsistency of the results of previous studies has resulted in a test of company diversification on earnings quality that needs to be conducted.

This study investigates the effect of market competition, customer concentration, and company diversification on earnings quality. Previous studies used emerging market data, such as market competition by Xing et al. (2018) with data on Chinese companies and company diversification used by Masud et al. (2017) with Pakistani company data. Meanwhile, research on customer concentration on earnings quality and management using emerging market data is rarely conducted. However, emerging markets such as China and Pakistan have implemented International Financial Reporting Standards (IFRS) like Indonesia. Amidu and Harvey (2016) have previously tested the effect of IFRS adoption on tax avoidance and earnings quality in emerging markets. The test results show that IFRS reduces tax avoidance and earnings management, so this variable is also relevant for use in emerging markets.

In the case of Indonesia, previous studies that reviewed earnings quality were still varied. Boulton et al. (2011) stated that Indonesia has low earnings quality, while Azizah (2017) showed no tendency to increase earnings management practices. The latest research conducted by Jaya and Narsa (2020) states that several companies in various industries in Indonesia are still implementing earnings management practices. Therefore, this research is relevant to be applied by using data on companies in
Indonesia. Also, this study uses different proxies, such as the customer concentration proxy referring to Abbasi (2020), Crawford et al. (2020), Deng and Yan (2019), and Kim (2021), in contrast to Aryotama and Firmansyah (2019) who tested tax aggressiveness in Indonesia.

This study also employs integrated reporting as a moderating variable, which is rarely conducted. According to stakeholder theory, companies do not only operate for their company but also provide benefits to stakeholders (Freeman, 1984). For the reporting presented to meet stakeholders’ information needs and expectations, one of the efforts that can be done is integrated reporting, which explains to investors and creditors how organizations create value over time (IIRC, 2013). Martínez (2015) suggested that the company’s information asymmetry will be reduced with integrated reporting. Shirabe and Nakano (2019) concluded that companies report earnings conservatively in accrual and real earnings management with integrated reporting. Yimenu and Surur (2019) stated that managers could voluntarily disclose information to reduce agency conflicts with shareholders. Furthermore, Shanti et al. (2018) concluded that integrated reporting companies report higher corporate earnings.

2. Literature Review, Theoretical Framework, and Hypothesis Development

Agency theory states that information asymmetry between managers and principals creates agency problems, especially when both parties intend to maximize each other’s welfare (Godfrey et al., 2010). Companies with high market competition can be easily compared with their competitors, allowing principals to be more accurate in monitoring and evaluating managers. Market competition reduces agency problems (Baggs & de Bettignies, 2007; Marciukaityte & Park, 2011). Marciukaityte (2011) pointed out that firms that engage in earnings management in competitive sectors receive harsher penalties from the market when found out. Markarian and Santaló (2014) found that competitive competition increases the intention to manipulate earnings because of greater punishment/loss if the company shows weak or uncompetitive earnings. Xing et al. (2018) concluded that managers in companies with higher competitive positions perform earnings management by providing price volatility to customers to reduce cash flow volatility. Market competition can affect the company’s earnings quality by increasing or decreasing earnings quality. However, market competition in Indonesia is expected to reduce earnings quality due to various industries’ spread of earnings management practices. High market competition increases management’s intention to practice earnings management to get rewards and avoid punishment and risks from outsiders. This earnings management practice will reduce the company’s reported earnings quality.

\[ H1. \] Market competition is negatively associated with earnings quality.

Companies with concentrated customers have stronger relationships with customers. Managers may intend to manage earnings because they fear losing significant customers, especially when they account for a large part of the company’s total sales. Limitations in presenting information to customers can occur due to information asymmetry. Profit-making managers can take actions that customers do not fully recognize about it. Managers will manage earnings because customers do not want to make long-term agreements with the company if the company’s prospects are uncertain (Huang et al., 2016). Deng and Yan (2019) stated that companies that receive pressure from their primary customers tend to have higher current and future profitability due to earnings management. Concentrated customers trigger managers to act opportunistically because of customer pressure to provide information about the prospects for good company performance. Company profit information is essential for customers to assess their potential partners. However, the manager’s actions cause the company’s profit not to reflect the actual condition of the company.
**H2.** Customer concentration is negatively associated with earnings quality.

Managers will manage earnings in diversified companies (El Mehdi & Seboui, 2011; Lim et al., 2008). The complex nature of diversification accentuates the problem of information asymmetry compared to focused firms (Bens & Monahan, 2004). Diversification raises complexity within the company, leading to information asymmetry between shareholders, investors, and creditors. In line with this, Lim et al. (2008) also stated that accounting information in diversified companies is more diverse, thus increasing the possibility of asymmetric information.

As a result, diversified firms also create many agency problems, thereby increasing earnings management practices. Kurniawati (2020) explained that diversified companies focus on research and development costs (R&D costs) in developing new segments/divisions. Investment, in this case, increases information asymmetry and agency costs because they tend to be used as managers’ discretionary costs so that management is more aggressive in reporting their financial statements. The high level of asymmetric information between agents and principals leads to agency problems, further enhancing earnings management practices (Richardson, 2000). Companies diversify their businesses to increase their competitive advantage through product or geographic area diversification. However, diversification results in the rise of diverse information and more complex structures and focuses on research and development costs that increase asymmetric information.

**H3.** Company diversification is negatively associated with earnings quality.

Based on stakeholder theory, the manager has a binding obligation to prioritize the principal’s needs and increase the firm value (Freeman, 2015). The managers will maintain their relationships with stakeholders by conveying good quality information. Integrated reporting is a company report that provides more disclosures related to company information, not only limited to financial information. Integrated reporting offers the most transparent communication that leads to short-term, medium-term, and long-term value creation (IIRC, 2013).

In companies with a high level of competition, quality information causes competing companies to get information about the company’s broad picture. When a company has products with close substitutes, company performance information can be used as a relevant benchmark for competitors to adjust their strategy to make it easier to gain a competitive advantage (Guo et al., 2015). Managers will find achieving the principal’s expectations to carry out earnings management practices more challenging. In this case, competition causes managers to limit earnings information to competitors (Datta et al., 2013) to decrease earnings quality. Obeng et al. (2020) concluded that companies that voluntarily implement integrated reporting have higher earnings quality than companies that do not apply it, even when its agency costs are high. Integrated reporting also effectively spreads integrated thinking that emphasizes long-term value creation so that companies report earnings conservatively regarding accrual and real earnings management (Shirabe & Nakano, 2019). In creating this value, the company will prioritize the quality of information so that the reporting presented meets stakeholders’ information needs and expectations.

**H4.** Integrated reporting weakens the negative effects of market competition on earnings quality.

The company’s relationship with customers can significantly influence financial and accounting policies, including the selection of disclosures (Ellis et al., 2012). Corporate customers, especially major customers, need accounting information from the company because they intend clarity on its prospects (Huang et al., 2016). Customers and companies will share product-related information related to performance and risks. Concentrated customers will have lower costs for obtaining company information, which lowers overall customer demand/public demand.
(Crawford et al., 2020). However, because there is still information asymmetry, managers may act opportunistically so that business prospects look good, reducing earnings quality. Concentrated customers have high bargaining power (Aryotama & Firmansyah, 2019). They demand that companies provide more information through their relationship with the company and public channels. Public reports are seen as more credible than reports through special relationships because management estimates in preparing reports are based on litigation and reputation considerations so that they may be preferred over certain communications (Crawford et al., 2020). Integrated reporting is implemented to provide more public information.

**H5.** Integrated reporting weakens the negative effects of customer concentration on earnings quality.

The manager diversifies its business interests. However, diversified companies are often associated with high information asymmetry due to the complexity of the company (Bens & Monahan, 2004), the amount of diverse information (Lim et al., 2008), and the high costs incurred for new divisions (Kurniawati, 2020). According to Richardson (2000), information asymmetry influences managers to take opportunistic actions such as earnings management. The alignment of company reports with the integrated reporting framework reduces this information asymmetry (Martinez, 2016). One of the goals of integrated reporting in the IIRC Framework 2013 is that integrated reporting will promote a more cohesive and efficient approach to enterprise reporting that draws on different strands of reporting and communicates the various factors that materially affect an organization’s ability to create value over time (IIRC, 2013). This information connectivity reduces information asymmetry so that management will reduce its opportunistic actions because the opportunities due to information asymmetry have been reduced.

**H6.** Integrated reporting weakens the negative effects of company diversification on earnings quality.

### 3. Research Method

This study uses quantitative methods. The secondary data in this study are in the form of financial reports and annual reports of manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2016 to 2020 because the obligation to prepare annual reports by the directors is regulated by the Financial Services Authority (OJK) Regulation No. 29/POJK. 04/2016 concerning the Annual Report of Issuers or Public Companies. This data was obtained from www.idx.co.id and the company’s official website. The sample was obtained using purposive sampling with the following criteria:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing companies listed on IDX as of January 2021</td>
<td>195</td>
</tr>
<tr>
<td>Companies that conduct IPOs after December 31, 2014</td>
<td>-59</td>
</tr>
<tr>
<td>Companies that do not have 2014-2016 financial statements and 2016-2020 annual reports</td>
<td>-12</td>
</tr>
<tr>
<td>Companies with a fiscal year-end other than December 31</td>
<td>-2</td>
</tr>
<tr>
<td>Companies with a total sales value equal to zero</td>
<td>-1</td>
</tr>
<tr>
<td>Number of samples used</td>
<td>121</td>
</tr>
<tr>
<td>Period (years)</td>
<td>5</td>
</tr>
<tr>
<td>Total observation</td>
<td>605</td>
</tr>
</tbody>
</table>

The dependent variable in this study is earnings quality which is measured using real earnings management (REM) proxy according to Cohen et al. (2008) as used in several previous studies (Cohen & Zarowin, 2010; Ferdiawan & Firmansyah, 2017; Francis et al., 2014; Lee & Chung, 2019; Prakosa et al., 2022). A high REM value...
indicates a low earnings quality. To obtain REM value, we should generate abnormal levels of CFO, abnormal discretionary expenses, and abnormal production costs. To estimate abnormal CFO, the following cross-sectional regression is run for each industry and year:

\[
\frac{\text{CFO}_{it}}{\text{Assets}_{it-1}} = k_1 \frac{1}{\text{Assets}_{it-1}} + k_2 \frac{\text{Sales}_{it}}{\text{Assets}_{it-1}} + k_3 \frac{\Delta \text{Sales}_{it}}{\text{Assets}_{it-1}} + \epsilon_{it}
\]

The abnormal CFO of each company is derived from the residual value of the equation. To estimate abnormal production cost, the following cross-sectional regression for each industry and year:

\[
\frac{\text{Prod}_{it}}{\text{Assets}_{it-1}} = k_1 \frac{1}{\text{Assets}_{it-1}} + k_2 \frac{\text{Sales}_{it}}{\text{Assets}_{it-1}} + k_3 \frac{\Delta \text{Sales}_{it-1}}{\text{Assets}_{it-1}} + k_4 \frac{\Delta \text{Sales}_{it-1}}{\text{Assets}_{it-1}} + \epsilon_{it}
\]

The abnormal production cost of each company is derived from the residual value of the equation. To estimate abnormal discretionary expenses, the following cross-sectional regression for each industry and year:

\[
\frac{\text{DiscExp}_{it}}{\text{Assets}_{it-1}} = k_1 \frac{1}{\text{Assets}_{it-1}} + k_2 \frac{\text{Sales}_{it-1}}{\text{Assets}_{it-1}} + \epsilon_{it}
\]

To capture the aggregate effect of REM, this research employs comprehensive calculation as Cohen et al. (2008) and Cohen & Zarowin (2010) as follows:

\[
\text{REM PROXY} = (-1 \times \text{Ab.CFO}) + \text{Ab.Prod} + (-1 \times \text{Ab.DiscExp})
\]

Abnormal discretionary expenses and abnormal cash flows from operations are multiplied by negative 1, respectively (thus, a higher amount indicates an increasing likelihood that companies cut discretionary expenses and engage in sales manipulations to manage reported earnings upwards) and added to abnormal production costs. The independent variables in this study are market competition, customer concentration, and company diversification. Market competition using the Herfindahl-Hirschman Index (HHI) follows several previous studies (Marciukaityte & Park, 2011; Markarian & Santaló, 2014; Shi et al., 2018; Xing et al., 2018). Market competition is measured as follows:

\[
\text{COMP} = \sum_{i=1}^{n} \left( \frac{S_i}{S} \right)^2
\]

Where:
\[n\] = the number of companies listed on the IDX in each sector manufacture
\[S_i\] = company’s revenue in each manufacturing sector
\[S\] = total company’s revenue in each manufacturing sector

Customer concentration was measured according to Patatoukas (2012), also used in several previous studies (Abbasi & Tamoradi, 2020; Crawford et al., 2020; Deng & Yan, 2019; Kim, 2022). Customer concentration is measured as follows:

\[
\text{CC}_{it} = \sum_{j=1}^{J} \left( \frac{\text{Sales}_{ijt}}{\text{Sales}_{it}} \right)^2
\]

Where:
\[\text{Sales}_{ijt}\] = company i’s sales to customer j in year t
\[\text{Sales}_{it}\] = total sales of the company i in year t
According to Aryotama & Firmansyah (2019) and Gu et al. (2018), company diversification is measured using the entropy index. The measurements are as follows:

\[ \text{DIVERSE}_{it} = \sum_{i=0}^{n} \frac{1}{P_i} \]

Where:
- \( n \) = number of segments
- \( P_i \) = percentage of revenue from segment \( i \)

The moderating variable in this study is integrated reporting (IR). The measurement of the IR index is carried out according to Herath and Gunarathne (2016). This checklist is modified to assess gaps between reporting practices companies and IIRC in preparing integrated reports. The index matches the criteria listed on the checklist or eight content elements IIRF 2013, which is measured as follows:

\[ \text{IR}_{it} = \frac{\text{Total value disclosed in company’s report}}{\text{Total value in checklist framework}} \]

This study uses three control variables: profitability, firm size, and leverage. According to Aprilia et al. (2020), Ardianti (2018), and Purnamasari and Fachrurrozie (2020), profitability is measured as follows:

\[ \text{ROA}_{it} = \frac{\text{Net Income}_{it}}{\text{Total Asset}_{it}} \]

Firm size proxies in this study follow Ananda & Ningsih (2016), Purnamasari and Fachrurrozie (2020), and Wuryani (2013), which are measured as follows:

\[ \text{SIZE}_{it} = \text{Natural Logarithm (Ln) of Total Assets} \]

The leverage proxy follows Purnamasari and Fachrurrozie (2020), Sutopo (2012), and Yasa et al. (2020) as follows:

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

This research uses two regression analyses to test the hypothesis. The first regression model is used to examine the effect of market competition, customer concentration, and company diversification on earnings quality as presented in the first hypothesis to the third hypothesis, which is as follows:

\[ \text{EQ}_{it} = \alpha_0 + \beta_1 \text{COMP}_{it} + \beta_2 \text{CC}_{it} + \beta_3 \text{DIVERSE}_{it} + \beta_4 \text{ROA}_{it} + \beta_5 \text{SIZE}_{it} + \beta_6 \text{LEV}_{it} + \varepsilon_{it} \]

Furthermore, to examine the role of integrated reporting in moderating the effect of the independent variable on the dependent variable, as stated in the fourth to sixth hypotheses, the second regression model is as follows:

\[ \text{EQ}_{it} = \alpha_0 + \beta_1 \text{COMP}_{it} + \beta_2 \text{CC}_{it} + \beta_3 \text{DIVERSE}_{it} + \beta_4 \text{IR}_{it} + \beta_5 \text{COMP}_{it} \times \text{IR}_{it} + \beta_6 \text{CC}_{it} \times \text{IR}_{it} + \beta_7 \text{DIVERSE}_{it} \times \text{IR}_{it} + \beta_8 \text{ROA}_{it} + \beta_9 \text{SIZE}_{it} + \beta_{10} \text{LEV}_{it} + \varepsilon_{it} \]

Where:
- \( \text{EQ}_{it} \) = earnings quality
Table 2. Descriptive Statistics of Research Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMPROXY</td>
<td>605</td>
<td>0.0077</td>
<td>0.0773</td>
<td>0.3383</td>
<td>-1.7125</td>
<td>0.8093</td>
</tr>
<tr>
<td>ABNCFO</td>
<td>605</td>
<td>0.0048</td>
<td>0.0152</td>
<td>0.1007</td>
<td>-0.4928</td>
<td>0.3600</td>
</tr>
<tr>
<td>ABNPROD</td>
<td>605</td>
<td>0.0001</td>
<td>0.0297</td>
<td>0.1785</td>
<td>-0.8730</td>
<td>0.6880</td>
</tr>
<tr>
<td>ABNDISCEXP</td>
<td>605</td>
<td>0.0029</td>
<td>0.0397</td>
<td>0.1244</td>
<td>-0.5766</td>
<td>0.4071</td>
</tr>
<tr>
<td>COMP</td>
<td>605</td>
<td>0.1671</td>
<td>0.1234</td>
<td>0.1403</td>
<td>0.0642</td>
<td>0.4379</td>
</tr>
<tr>
<td>CC</td>
<td>605</td>
<td>0.1032</td>
<td>0.0000</td>
<td>0.1873</td>
<td>0.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>DIVERSE</td>
<td>605</td>
<td>0.4998</td>
<td>0.4898</td>
<td>0.4351</td>
<td>0.2755</td>
<td>1.6989</td>
</tr>
<tr>
<td>IR</td>
<td>605</td>
<td>0.5841</td>
<td>0.5658</td>
<td>0.1123</td>
<td>0.3421</td>
<td>0.9079</td>
</tr>
<tr>
<td>ROA</td>
<td>605</td>
<td>0.0426</td>
<td>0.0323</td>
<td>0.1117</td>
<td>-1.0498</td>
<td>0.7160</td>
</tr>
<tr>
<td>SIZE</td>
<td>605</td>
<td>28.6955</td>
<td>28.4822</td>
<td>1.5757</td>
<td>25.2156</td>
<td>33.4945</td>
</tr>
<tr>
<td>LEV</td>
<td>605</td>
<td>0.5348</td>
<td>0.4838</td>
<td>0.5189</td>
<td>0.0651</td>
<td>5.1677</td>
</tr>
</tbody>
</table>

Based on the table above, the mean value of RMPROXY during the 2016-2020 period was 0.0077, with a median value of 0.0773 and a standard deviation of 0.3383. The maximum value of RMPROXY was 0.8093, owned by TBMS in 2016, while the minimum value of this variable was -1.7125 by UNVL in 2017. ABNCFO has a mean value during the 2016-2020 period of 0.0047 with a median value of 0.0151 and a standard deviation of 0.1007. The maximum value of ABNCFO was 0.3599, owned by TBMS in 2016, while the minimum value of this variable was -0.4928 by MLBI in 2016. The mean value of ABNPROD during the 2016-2020 period was 0.0001, with a median value of 0.0297 and a standard deviation of 0.1785. The maximum value of ABNPROD was 0.6880, owned by PTSN in 2018, while the minimum value of ABNPROD was 0.8730 by UNVR in 2017. The mean value of ABNDISCEXP during the 2016-2020 period was 0.0029, with a median value of 0.0397 and a standard deviation of 0.1244. The maximum value of ABNDISCEXP was 0.4071, owned by ALKA in 2016, while the minimum value of this variable was -0.5757 by UNVR in 2018. The mean value of the COMP variable during the 2016-2020 period was 0.1670. A mean value close to zero indicates that market competition in manufacturing sector companies tends to be high, or in other words, the market share is dispersed among companies in the sector, while close to one means that there are only a few companies with a large market share. The highest and largest average values were found in 2017, namely 0.4379 and 0.1708, respectively, in the various industrial sectors, which showed the largest dispersed market share in that year. In other words, the market competition was very high. Meanwhile, the smallest average was in 2020, and the smallest value was in 2016 in the basic and chemical industry sector. The average value of the CC variable during the 2016-2020 period is 0.1031 CC which describes the percentage of concentrated customers owned by the company so that an average value close to zero indicates low customer concentration or, in other words, the company’s sales are not concentrated on certain customers. The maximum value of CC is 1, owned by INRU from 2016 to 2017 and LMSH in 2020. Meanwhile, the minimum value is 0 consisting of 63 companies, which illustrates that 65 companies have no customers with more than 10% sales. DIVERSE values range from 0 to 1.6989, with a mean value of 0.4998 and a standard deviation of 0.4351. CINT carried out the highest company diversification in 2020, with
a value of 1,6989. Meanwhile, as many as 24 companies have a value of 0 which shows that as many as 24 companies in the manufacturing sector do not carry out business segmentation. The mean for IR from 2016 to 2020 is 0,5841, with a median value of 0,5657. The maximum value is in 2017 and 2018, which is 0,9079 owned by INAF— meanwhile, the minimum value in 2016 of 0,3421 by KICI. The mean ROA value of all observations during 2016-2020 was 0,0426. LPIN obtained the highest profitability value in 2017 of 0,7160, while TIRT obtained the lowest profitability value in 2016 of 1,0498. The mean SIZE during the 2016-2020 period was 28,6955. The maximum SIZE value was found in 2019, which was 33.4945 by ASII, with total assets of IDR351.958.000.000. Meanwhile, the minimum SIZE value owned by the BIMA company in 2017 was 25,2156, with total assets of IDR89.327.328.853. The mean value of the company's leverage during the 2016-2020 period was 0,5348, which shows that the company has a liability of 53.48% of its total assets. The highest leverage value was found in 2020 by POLY, which was 5,1677. Meanwhile, the minimum value is in 2019 by IIKP of 0,0651.

Furthermore, after performing the Chow test, Lagrange Multiplier test, and Chow test, the best model for model 1 and the model is the fixed effect model. Meanwhile, a summary of the hypothesis testing is presented in Table 3.

<table>
<thead>
<tr>
<th>Table 3.</th>
<th>Coef.</th>
<th>t-stat</th>
<th>Prob.</th>
<th>Coef.</th>
<th>t-stat</th>
<th>Prob.</th>
</tr>
</thead>
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<tr>
<td>COMP</td>
<td>0,9159</td>
<td>2,6591</td>
<td>0,0040***</td>
<td>0,6756</td>
<td>0,9120</td>
<td>0,1811</td>
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<tr>
<td>CC</td>
<td>0,0065</td>
<td>0,1542</td>
<td>0,4387</td>
<td>0,0579</td>
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<td>0,4433</td>
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<td>DIVERSE</td>
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<td>0,8561</td>
<td>0,1962</td>
<td>-0,2893</td>
<td>-1,5684</td>
<td>0,0587***</td>
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<tr>
<td>IR</td>
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<td>0,8040</td>
<td></td>
<td>0,0016***</td>
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<tr>
<td>COMP_IR</td>
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<tr>
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<td>DIVERSE_IR</td>
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<td>1,4689</td>
<td>0,0712*</td>
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<td>ROA</td>
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<td>-1,8539</td>
<td>0,0322**</td>
<td>-1,073</td>
<td>-2,0244</td>
<td>0,0217**</td>
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<tr>
<td>SIZE</td>
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<td>4,7064</td>
<td>0,0000***</td>
<td>0,1029</td>
<td>4,8578</td>
<td>0,0000***</td>
</tr>
<tr>
<td>LEV</td>
<td>0,0189</td>
<td>0,8080</td>
<td>0,2097</td>
<td>0,0299</td>
<td>1,2911</td>
<td>0,0986*</td>
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<tr>
<td>C</td>
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<td>-4,8678</td>
<td>0,0000***</td>
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<tr>
<td>R²</td>
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<td>Adjusted R²</td>
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<td>F-Statistic</td>
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<td>Prob. (F-statistic)</td>
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</table>

### 4.1 Discussion

**The Association Between Market Competition and Earnings Quality**

Based on the result of hypothesis testing, market competition is negatively associated with earnings quality. This study's results align with previous studies (Guo et al., 2015; Markarian & Santaló, 2014; Sulistiawan & Rudiawarni, 2019; Widuri & Sutanto, 2019; Xing et al., 2018). Meanwhile, this study is not in line with Lemma et al. (2018), Marcikaityte and Park (2011), and Shi et al. (2018). The difference in research results is thought to have occurred because Lemma et al. (2018) and Markarian and Santaló (2014) use discretionary accrual proxies or earnings management accruals to measure earnings quality. Meanwhile, the difference between the study results of Shi et al. (2018) is possible because the study uses a market competition proxy based on textual analysis of the words in the report.
Based on agency theory, an agency relationship is a contract between the agent and the principal in which both parties work for their interests (Jensen & Meckling, 1976). The theory predicts the effect of market competition on earnings quality because high competition threatens the company's sustainability in the future. Hence, the principal asks managers to fulfill their demands, such as achieving the specified profit target. Meanwhile, managers act for themselves because of their highly uncertain career concerns. Managers take opportunistic actions such as earnings management to achieve the desired profit. However, earnings management will be risky because companies in competitive industries will be more severely affected if they carry out this practice (Marcilukaityte & Park, 2011). As a result, the company's performance will be much worse in the long run because it imposes higher long-term costs on the company (Roychowdhury, 2006). Thus, managers tend to carry out earnings management through real activities because earnings manipulation through real activities is difficult to identify (Cohen et al., 2008) for its purpose, namely for company activities or as part of earnings management (Magiera, 2021).

The Association Between Customer Concentration and Earnings Quality

Based on the results of hypothesis testing, customer concentration is not associated with earnings quality. The result does not align with previous research (Deng & Yan, 2019; Kim, 2022). Customer concentration (CC) describes a measure of the number of customers, especially the company's main customers, and is related to how the total revenue is distributed in that customer base. In PSAK 5 concerning Operating Segments, customers whose sales contribution to the company is above 10% can be referred to as primary customers. Customer concentration is a strategy companies use to trigger substantial growth in the business (Working, 2019) by increasing profitability and making supply chains more efficient (Campello & Gao, 2017). However, a high concentration of customers has several risks, such as bankruptcy risk and stock prices (Abbasi & Tamoradi, 2020), cash flow risk (Aryotama & Firmansyah, 2019), and credit risk (Campello & Gao, 2017).

The relationship between customer concentration and the quality of company earnings can be explained in agency theory regarding asymmetric information. The presence of customer concentration does not encourage companies to manipulate earnings through the company's real activities. This condition can be caused by allegedly occurring because real earnings management is related to the real actions of the company. The company's activities will primarily connect to only a few customers with concentrated customers. Real earnings management that is carried out is indeed complex for outsiders to know, one of which is because of the direct consequences of cash flow with customers only (Deng & Yan, 2019). This condition shows minor asymmetric information between customers and companies through real activities. Thus, companies do not perform real earnings management when they have concentrated customers, in line with the research results showing that managers do not manipulate sales, production, or discretionary cost reductions when they have customer concentration.

The Association Between Company Diversification on Earnings Quality

Based on the results of hypothesis testing, company diversification is not associated with earnings quality. This study's results align with previous studies (Dimarcia & Krisnadewi, 2016; Jiraporn et al., 2008; Lupitasari & Marsono, 2012). However, the result does not align with several previous studies (El Mehdî & Sebouî, 2011; Farooqi et al., 2014; Kurniawati, 2020; Lim et al., 2008; Masud et al., 2017; Nußmann, 2018). Company diversification is a strategy carried out by expanding business operations in many businesses to achieve the company's long-term goals internally and externally (Hariandja, 2018). These goals create an internal capital market, where divisions with high cash flow but limited investment opportunities can finance divisions with low cash flows but have better investment opportunities, create
tax advantages, and benefit business integration (Kurniawati, 2020). The effect of firm diversification on earnings quality is predicted in agency theory. The separation of ownership in large organizations leads to less monitoring by principals of managers, so managers can use the business property to maximize their welfare (Panda & Leepsa, 2017). Managers diversify their interests, such as higher salaries, increased future job prospects, and perceived higher positions (Aryotama & Firmansyah, 2019). The complexity of a diversified company also increases information asymmetry. There is a more incredible opportunity for managers to exploit, raising the possibility of earnings management, so earnings quality decreases.

**The Moderating Role of Integrated Reporting on The Effect of Market Competition on Earnings Quality**

Based on the results of hypothesis testing, integrated reporting (IR) does not succeed in strengthening or weakening the effect of market competition on earnings quality. IR is a form of corporate report that emphasizes increasing organizational value occasionally through efficient and effective capital allocation to achieve financial stability and sustainability (IIRC, 2013). IR benefits all interests interested in how the company increases its value. The form of IR can be distinguished or combined with other reports (IIRC, 2013). In Indonesia, the implementation of IR has been promoted by IAI and the National Center for Sustainability Reporting (Adhariani & Villiers, 2018). Although not required by OJK, the IR element has been applied to several companies through Financial Services Authority Regulation Number 29/POJK.04/2016 concerning Annual Reports of Issuers or Public Companies as part of the company's annual report or, in other words, still voluntary.

In line with IR, stakeholder theory states that managers manage and form relationships with stakeholders to create value for them (Freeman, 1984) and help businesses survive and thrive. In short, the company's relationship with stakeholders takes responsibility and accountability. In companies with a high level of competition, information asymmetry between managers and principals should be reduced because company managers will try to meet stakeholder demands through IR, which is a means to increase company transparency and accountability (IIRC, 2013).

**The Moderating Role of Integrated Reporting on The Effect of Customer Concentration on Earnings Quality**

The result suggests that integrated reporting does not succeed in moderating either strengthening or weakening the effect of customer concentration on the company's earnings quality. However, companies in Indonesia, specifically manufacturing, still have not presented information according to the IR framework in the last few years. IR aims to improve information quality for providers of financial capital and other stakeholders through the efficient and effective use of capital that increases firm value (IIRC, 2013). One of the ways to increase value is through activities and interactions with customers, such as sales to customers, customer satisfaction, and initiatives approved by the company's business partners.

According to stakeholder theory, the role of managers is to capture the nature of stakeholder interests and create value for them (Freeman, 1984). For this reason, companies usually need time to identify their stakeholders and what information they need (Naynar et al., 2018). The company's key stakeholders may be customers with concentrated customers because managers must pay attention to vital stakeholders (Laplume et al., 2008). They can more quickly understand and provide information needs of their stakeholders. On the other hand, significant customers also ask for information (Huang et al., 2016) and obtain information related to the company (Crawford et al., 2020). Disclosure of non-financial information activities to stakeholders should increase trust in the company, including disclosing information about the company's prospects (Jeffery, 2009). This relationship should reduce
information asymmetry between the two, forming a good relationship (Laplume et al., 2008) so that companies can improve their performance more quickly (Parmar et al., 2010).

The Moderating Role of Integrated Reporting on The Effect of Company Diversification on Earnings Quality

It suggests that integrated reporting (IR) strengthens the negative effect of company diversification on earnings quality. Diversification of the company resulted in the company having a wider stakeholder. Companies serve the interests of various stakeholders to achieve higher organizational performance, especially in complex product and service systems (Krucken & Meroni, 2006). On the other hand, stakeholders can influence the company because of the strategies implemented by the company.

The complexity of diversification causes high information asymmetry, so the opportunity for managers to carry out earnings management increases. On the other hand, stakeholders will demand company transparency. To meet these various stakeholders' demands, the IR application should reduce information asymmetry, which reduces the opportunity for managers to perform earnings management. However, the results of the study state that the opposite is suspected because the majority of IR users in Indonesia, namely investors (Adhariani & Villiers, 2018), cannot capture the content of IRs (Indrawati, 2017) and focus on other factors such as increasing company performance and maximizing profits. IR disclosure elements are non-numerical and unrelated to numerical information in company reports (Bhimantara & Dinarjito, 2021).

From a financial perspective, managers' primary responsibility is to maximize shareholder welfare (Parmar et al., 2010), but that does not mean ignoring stakeholders completely. The application of IR can also be used as manager opportunism. With broader responsibilities other than shareholders, managers' decision-making can be justified on behalf of stakeholders (Jensen, 2010). Jensen (2010) warns against giving managers too much flexibility in allocating resources to satisfy a large group of stakeholders. There is a tendency to allocate resources according to their wishes at the expense of efficiency. From the point of view of stakeholder theory, the application may indeed be in the stakeholders' interests. However, the implementation of IR is a one-sided claim from companies that view disclosure as appropriate but is still questionable. Users do not know the quality of their disclosures unless auditors must assess them. When it is only a one-sided claim, the manager's integrity can be questioned, especially in the absence of sanctions for companies that disclose elements of IR.

5. Conclusion, Implication and Limitations

Market competition worsens earnings quality due to earnings risk, managers' career concerns, complex business processes and levels of manufacturing management. Meanwhile, customer concentration does not affect earnings quality because the consequences of direct cash flow with customers are risky and are used for other activities, such as tax avoidance. Company diversification also does not affect earnings quality. IR does not strengthen or weaken market competition for earnings quality due to a lack of knowledge, no rules and sanctions, and users are still satisfied with the current reporting framework. Also, IR does not strengthen or weaken customer concentration on earnings quality because IR disclosures are not meant for significant customers. Meanwhile, implementing IR burdens customers in selecting relevant information. IR strengthens the negative effect of corporate diversification on earnings quality because a broader range of stakeholders can justify managers’ decisions.

This study has several limitations. The result of this study cannot generalize the behavior of all companies on the IDX. The IR scoring process follows the proxy adopted from the IR reporting framework. No other party has been able to confirm the index results, so the assessment is subjective. The latest IIRF framework, namely 2021, can
be used for future research, and the robustness test will strengthen the findings. This research is also helpful for investors and creditors by showing non-financial information that affects the quality of company earnings. Furthermore, the results of this research can be used as input for the Indonesian Financial Services Authority to encourage the implementation of integrated reporting with regulatory-driven new regulations. This study also urges the Government to review the regulation concerning Monopolistic Practices and Unfair Business Competition, which may indicate that companies have not optimally implemented the internalization of fair business competition values through the Business Competition Supervisory Commission (KPPU).

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