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Audit Quality of The Engagement Partner and Audit Firm

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ABSTRACT
This study examines the effect of the number of clients and complexity on audit quality at the engagement partner and public accounting firm levels. The discretionary accrual and real activities manipulation models are used to assess the audit quality at the engagement partner and public accounting firm levels. From 2013 to 2018, this study examined 506 firm-year observations for companies in the industrial sector listed on the Indonesian Stock Exchange. Using multiple linear regressions and controlling for year and industry fixed effects, our study discovered that the client complexity handled by engagement partners has an association with the engagement partners' audit quality declining using discretionary accruals. However, our study discovered no relationship between the number of clients at the engagement partner and audit firm levels, and client complexity at the audit firm level that influences audit quality. Thus, the findings of our study suggest to standard setters, capital market participants, and other stakeholders that audit quality at the engagement partner level remains a significant concern.

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INTRODUCTION

Prior research on audit quality has concentrated on public accounting firms or auditors, with little emphasis on audit quality at the partner level. By contrast, recent studies have focused exclusively on the audit quality of engagement partners, particularly in developing countries like Indonesia and ASEAN members, which have quite different institutional and legal settings than the United States. Lennox and Wu (2018), for example, document a significant increase in audit quality studies done at the partner level in America and Europe following the release of mandated information disclosure requirements from partners. Simultaneously, studies on the audit quality of audit partners located outside the United States of America have been conducted in Taiwan (e.g., Chin & Chi, 2009; Chi & Chin, 2011; Abodia et al., 2015; Hsieh & Lin, 2016), China (Gul et al., 2017), Indonesia (Herusetya & Jaunanda, 2021), and Malaysia (Hussin et al., 2018). These researches revealed that audit quality is more reliable when measured at the audit engagement partner level than when measured at the audit firm level (Hsieh & Lin, 2016; Chi & Chin, 2011). For example, Hsieh and Lin (2016) discovered that partners with industry expertise engage clients at a lower financial risk than firms do.

As long as the author's observations, the audit quality studies for engagement partners in Indonesia are still rare, except for Setiawan and Fitriany (2011) and Herusetya and Jaunanda (2021). On the other hand, the Indonesian government has issued Government Regulation Number 20 of 2015 (hereafter PP No. 20 of 2015) regarding the Practice of Public Accountants to increase audit quality from the audit service, including the quality of auditors or audit partners. One of the rules is the restriction of the tenure of the audit partners, i.e., a maximum period of service of five years. Nevertheless, in the practitioner's world, auditors and public accounting firms had committed violations. Based on a report from Finance Professions Supervisory Centre (Pusat Pembinaan Profesi Keuangan or PPPK) under the Ministry of Finance in 2018, PPPK conducted periodic checks on 60 public accountants at 60 audit firms consisting of 8 public accountants in the Big 10 and 52 Public Accountants in the non-Big 10 (https://pppk.kemenkeu.go.id). Most of the violations committed by the Big 10 and the non-Big 10 public accountants were violations in the form of quality control system implementation and standards with 6 and 54 violations, respectively, and 145 and 464 violations. Also, in 2018 PPPK has imposed 129 administrative sanctions against public accountants and public accounting firms, i.e., 30 and 49 sanctions, respectively. Although sanctions against public accountants tend to decrease from 2016 to 2019, sanctions imposed against public accounting firms tend to increase. The violations committed by the public accountants and the public accounting firms indicate low audit quality auditor or audit partners, even from the Big 10's public accounting firms, including the Big Four.

However, Herusetya and Jaunanda (2021) found no evidence of audit quality as assessed by industry specialization from audit partners on aggressive accrual-based earnings management (hereafter ABEM) and real activities manipulation (hereafter RAM) employing a sample of industrial companies in Indonesia. Rather than that, they discovered that audit firm with industry expertise has a positive effect on aggressive RAM. Additionally, Herusetya and Jaunanda (2021) discovered that industry expertise increases the frequency of generating modified audit opinions (MAO) at the firm level but not at the partner level. As a result, their findings differ from those obtained in Taiwan (Hsieh & Lin, 2016; Abodia et al., 2015). As a result, we question the effectiveness of the regulation of audit quality at the partner level.

Other studies outside America also highlight a decrease in the audit quality with an increase in the number of clients because a large number of clients causes a higher partner workload which results in lower audit quality (Gul et al., 2017; Hussin et al., 2018; Setiawan & Fitriany, 2011). For example, Setiawan and Fitriany (2011) reported that out of 16 large audit firms (kantor akuntan publik or KAP) in Indonesia, a partner of the auditing firms in Indonesia on average handled 67 audit engagements in one year. Setiawan and Fitriany (2011) discovered evidence that audit quality decreased as audit partners' workloads increased as a result of the increased number of clients handled by each audit partner. Gul et al. (2017) discovered that the number of clients audited by the partner-in-charge had an inverse relation with audit quality in their study in China. The findings of Gul et al. (2017) suggest the need to limit the number of clients audited by each audit partner; however, the

audit market in Indonesia is still largely dominated by public accounting firms affiliated with the Big Four audit firms, which have more partners than non-Big Four audit firms. The studies of Siregar and Utama (2008) and Herusetya (2012), for example, found that audit quality using the Big Four can no longer be effective to be used as a proxy for audit quality in Indonesia. In other words, a larger public accounting firm does not automatically have engagement partners with high audit quality.

This study is significant for a number of reasons. First, this study was undertaken in a developing country with institutional and legal environments that are distinct from those seen "in common law countries such as the United States and Australia" (Francis, 2011, p.141). For example, Iatridis (2012) discovered that, despite the fact that companies audited by the Big Four have a high audit quality, institutional differences between the two groups are significantly different in terms of earnings conservatism (as measured by discretionary accruals), cost of equity, and agency costs. This study, in particular, extends the lines of the audit quality studies conducted in Indonesia with regard to audit quality at the partner level (e.g., Setiawan & Fitriany, 2011; Herusetya & Jaunanda, 2021).

Second, our study is relevant due to the regulations regarding the limitation of the audit service tenure of the engagement partner that is still rare to be examined in Indonesia. The purpose of PP No. 20 of 2015 is to improve audit quality, particularly for the audit engagement partner quality. The study of Setiawan and Fitriany (2011), for example, examined the effect of the workload on the audit quality using absolute discretionary accruals. Nevertheless, their study did not directly measure the workload at the engagement partner level individually. Instead, the workload was measured using the number of clients from the audit firms divided by the number of partners in the respective audit firms. In addition, the observation period of Setiawan and Fitriany (2011) was in the year 2006-2008 before enacting the Government Regulation regarding the audit partner rotation (PP No. 20 of 2015). Therefore, our study aims to answer whether the increasing number of clients and client complexity can affect audit quality in the engagement partner and audit firm as a unit analysis. This study is essential because a new engagement partner must understand the related client industry and business after the engagement partner rotation. Bedard and Johnstone (2010) found that a new audit partner needs more efforts to obtain specific information about the clients that might reduce the audit quality with the rotation or the change of audit partners.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Number of Clients and Audit Quality for the Engagement Partner and Audit Firm

Recent research on the audit quality of engagement partners has intensified, particularly in America and Europe, where the auditee is obligated to publish information on audit partners to the public (Lennox & Wu, 2018). Meanwhile, studies in Asia with a low litigation environment are still limited by several researchers related to audit partners even though disclosure of information from audit partners already exists (for example, Abodia et al., 2015; Chi et al., 2012; Hussin et al., 2018; Gul et al., 2013).

In particular, several previous researchers have carried out studies on audit partner workload (Lai et al., 2018; Gul et al., 2017). Prior studies found that audit partners with an increasing number of public company clients have a negative effect on the audit quality (Lai et al., 2018). Gul et al. (2017), using sample data from public companies in China, found an inverse relationship between the audit quality and the number of clients handled by the engagement partners. These findings follow the busyness theory, which suggests that the number of clients being audited causes a reduction in partner effort, which causes the audit quality to decline. In particular, they discovered the audit quality of partners would decline, reflected in the many earnings manipulations identified by the Chinese capital market authority, the tendency to meet earnings targets, and the less likelihood to issue going-concern opinions. Other studies on emerging markets, such as Lai et al. (2018) in Malaysia, found that individual auditors with many clients were positively related with the higher accruals discretionary and total accruals resulting in declining earning quality.

The following hypothesis will be tested in light of the foregoing arguments and findings:

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H1a: An increase in clients has a negative influence on the quality of the audit engagement partner.

H1b: An increase in clients has a negative influence on audit quality at the audit firm level.

The Complexity of the Client and the Audit Quality for the Engagement Partner and Audit Firm

Clients with high levels of complexity result in larger partner workloads and require higher audit effort, so engagement audit partners with higher-level clients' complexity are at risk of lower audit quality. Gul et al. (2017) found that client complexity also affects audit quality. Gul et al. (2017) found that high client complexity measured by total asset of the client, company growth rate, bankruptcy risk, and low net income associated with lower audit quality for a sub-sample with short tenure partners. Those findings suggested that both auditors and public accounting firms with short audit tenures cannot identify and get to know clients better, incredibly complex clients. With the same assumption, audit partners and audit firms with a high level of client complexity will be negatively associated with audit quality.

The following hypothesis will be investigated in light of the foregoing arguments:

H2a: Client complexity has a negative impact on an audit engagement partner's audit quality.

H2b: At the audit firm level, client complexity has a negative impact on audit quality.

RESEARCH METHODS

Sample Selection and Data Sources

This research is an association study with hypothesis testing using secondary data taken from the IDX for the 2013-2018 period, using a population from the industrial sector, including the real estate, property industry, building construction, infrastructure utilities, and transportation. The sample selection used the purposive sampling method. Sources of data are taken from the financial reports published that have been audited by a public accounting firm and the opinion of an independent auditor where there is information from engagement partners or signing partners in the audited report published on the website of a public company. Based on the sample selection using our purposive sampling, the number of sample observations is 506 firm-years. Table 1 explains the descriptions of our sample selection.

Empirical Model

We use multiple regression models to test the hypotheses H1a and H1b, namely Model 1 with the ABEM model (discretionary accruals) and Model 2 with the RAM model.

Table 1. Sample Selection

Description	Total
Number of the property industry, real estate, building construction, infrastructure utilities, and transportation listed on Indonesia Stock Exchange from 2013 to 2018 in firm-years observations	936
Less: State own companies or BUMN	48
Less: missing data and non-active firms during the year 2013-2018	78
Less: data using foreign currency (USD)	176
Less: companies IPO during the year 2013-2018	128
Final sample in firm-year observations	506

We also do with the H2a and H2b using Model 1 and Model 2. The empirical regression model (1) and model (2) is as follows:

$$DAC = \beta_1 + \beta_2\ NC\_PARTNER + \beta_3\ NC\_FIRM + \beta_4\ CS\_PARTNER + \beta_5\ CS\_FIRM + \beta_6\ DBIG4 + \beta_7\ SIZE + \beta_8\ LVRG + \beta_9\ DLOSS + \beta_{10}\ CFOA + \beta_{11}\ DSALES + \beta_{12}\ BTM + \beta_{13}\ ROA + \beta_{14}\ DROA + \beta_{15}\ AGE + \beta_{16}\ RAM + \beta_{17}\ TACC + \delta j\ DUMYEAR + \mu k\ DUMINDUSTRY + \varepsilon \quad \text{(Model 1)}$$

$$RAM = \alpha_1 + \alpha_2\ NC\_PARTNER + \alpha_3\ NC\_FIRM + \alpha_4\ CS\_PARTNER + \alpha_5\ CS\_FIRM + \alpha_6\ DBIG4 + \alpha_7\ SIZE + \alpha_8\ LEVRG + \alpha_9\ DLOSS + \alpha_{10}\ CFOA + \alpha_{11}\ DSALES$$

$$+ \alpha_{12} BTM + \alpha_{13} ROA + \alpha_{14} DROA + \alpha_{15} AGE + \alpha_{16} DAC + \delta j DUMYEAR + \mu k DUMINDUSTRY + \varepsilon \text{ (Model 2)}$$

In order to support all hypotheses (H1a, H1b, H2a, and H2b), we expect that the coefficients for β2 (NC_PARTNER), β3 (NC_FIRM), β4 (CS_PARTNER), and β5 (CS_FIRM) in Model 1 are all negative and significant. Likewise, we also expect that the coefficients of α2 (NC_PARTNER), α3 (NC_FIRM), α4 (CS_PARTNER), and α5 (CS_FIRM) in Model 2 are all negative and significant to support the H1a, H1b, H2a, and H2b hypotheses. Please see the variables descriptions in Table 2.

Operational Variables

Discretionary Accrual (DAC). According to Greiner et al. (2017), the dependent variable for discretionary accruals (DAC) is generated in Model 1 using Jones' (1991) accrual model, as amended by Dechow et al. (1995). As a result, equation (1) has the following accrual model (please see Tucker and Zarowin, 2006):

$$TACC_{i,t}/TA_{i,t-1} = \delta_0 + \delta_1 1/TA_{i,t-1} + GPPE_{i,t}/TA_{i,t-1} + \Delta REV_{i,t}/TA_{i,t-1} + ROA_{i,t} + e_{i,t} \quad (1)$$

Please refer to Table 2 for equation variable definitions (1). The value of DAC (signed discretionary accruals) is calculated as the difference between the actual TACC value and the estimated value of equation (1).

Real Activities Manipulation (RAM). The dependent variable of Model 2, i.e., the RAM is the aggregate value of the RAM measured at the individual level. We follow Kim and Park (2014) to measure the abnormal CFO, abnormal production, and abnormal discretionary expense. These models are as follows:

$$CFO_{i,t}/TA_{i,t-1} = \alpha_0 + \alpha_1 1/TA_{i,t-1} + \alpha_2 S_{i,t}/TA_{i,t-1} + \alpha_3 \Delta S_{i,t}/TA_{i,t-1} + e_{i,t} \quad (2)$$

$$PROD_{i,t}/TA_{i,t-1} = \alpha_0 + \alpha_1 1/TA_{i,t-1} + \alpha_2 S_{i,t}/TA_{i,t-1} + \alpha_3 \Delta S_{i,t}/TA_{i,t-1} + \alpha_4 \Delta S_{i,t-1}/TA_{i,t-1} + e_{i,t} \quad (3)$$

$$DISEXP_{i,t}/TA_{i,t-1} = \alpha_0 + \alpha_1 1/TA_{i,t-1} + \alpha_2 S_{i,t-1}/TA_{i,t-1} + e_{i,t} \quad (4)$$

The value of residual errors from regressions in equation (2) to equation (4) becomes the value of abnormal CFO (ABN_CFO), abnormal production (ABN_PROD), and abnormal discretionary expense (ABN_DISEXP). Thus, following Kim and Park (2014), the RAM value is the sum of (ABN_PROD – ABN_CFO – ABN_DISEXP).

Number of Clients (NC_PARTNER and NC_FIRM). Following Gul et al. (2017), the number of clients is calculated based on the number of clients handled by each partner (NC_PARTNER) and audit firm (NC_FIRM) in each firm-year.

Client Complexity (CS_PARTNER and CS_FIRM). Following Gul et al. (2017), the client complexity can be calculated using a complexity score based on their characteristics. The formula is 1 + C1 + C2 + C3 + C4, where clients with a score of 1 have a low level of complexity while clients with a score of 5 have the highest complexity. Thus, each characteristic value of the client complexity (CS_n) is as follows:

C1 = 1, if the company is a large client, measured by the natural logarithm of the total assets and in the highest quartile in year t; and 0 otherwise.

C2 = 1, if the company is a high growth client, measured by the sales growth and in the highest quartile, and 0 otherwise.

C3 = 1, if the company has a high risk of financial distress, measured by the Zmjewski (1984) Financial distress prediction score and in the highest quartile in year t; 0 otherwise. We follow Chi and Chin (2011) and use the equation b*= -4.803 – 3.6 (Net Income/Total Assets) + 5.4 (Total Debt/Total Assets) – 0.1 (Current Assets/Current Liabilities) to predict the score of financial distress firm (b*).

C4 = 1, if the company has negative or low net income, i.e., the value of ROA is less than 10 percent in year t; 0 otherwise.

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Table 2. Variable Definitions

Model 1 and Model 2		
NC_PARTNER	=	Number of clients, i.e., the total number of clients handled by each engagement partner
NC_FIRM	=	Number of clients at the audit firm level, i.e., the total number of clients handled by each audit firm
CS_PARTNER	=	Client complexity at the engagement partner level. We follow Gul et al. (2017) to compute the client complexity score for each engagement partner.
CS_FIRM	=	Client complexity at the audit firm level, i.e., the total client complexity score for all clients in each audit firm.
DBIG4	=	Dummy variable, 1 if the firm is audited by one of the big4 audit firms, and 0 otherwise
SIZE	=	Natural logarithm of total assets
LEVRG	=	Total liabilities divided by total assets
DLOSS	=	Dummy variable, 1 if a firm reports loss in the year t; and 0 otherwise
CFOA	=	Operating cash flows scaled by lag total assets
DSALES	=	Growth in sales, i.e., sales t- sales t-1
BTM	=	Book to market ratio
ROA	=	Return on assets
DROA	=	Change in return on assets
AGE	=	Number of years since the firm IPO
TACC	=	Total accruals, i.e., operating income minus cash flows from operating activities
DUMYEAR	=	Year dummies
DUMINDUSTRY	=	Industry dummies
Equation (1)		
TACC	=	Total accruals, i.e., operating income minus cash flows from operating activities
A	=	Total assets
PPE	=	Property, Plant, and assets in the gross amount
ΔREV	=	Changes in revenues, i.e., sales t- sales t-1
ROA	=	Return on assets
Equation (2), (3), and (4)		
CFO	=	Cash flows from operating activities
A	=	Total assets
S	=	Sales
ΔS	=	Changes in sales, i.e., sales t - sales t-1
PROD	=	The sum of the cost of goods sold and changes in inventory
DISEXP	=	The sum of R&D costs, promotion costs, and SG&A
RAM	=	The aggregate value of real activities, i.e. (ABN_PROD – ABN_CFO – ABN_DISEXP)

The value of client complexity (CS) in this study consists of the value of client complexity for each partner (CS_PARTNER), which is calculated from the total value of client complexity handled by each partner, and the value of client complexity for all clients handled by each audit firm (CS_FIRM) in each firm-year.

DATA ANALYSIS AND DISCUSSION

Descriptive Statistics

Table 3 contains descriptive statistics for all variables considered in Models 1 and 2. For example, in Table 3, the mean of discretionary accrual (DAC) for 506 firm-year observations was 0.025 or 2.50 percent of the previous year's total assets, with minimum and maximum values of -68.29 and 83.52 percent, respectively. Meanwhile, the mean of real activities manipulation (RAM) was -0.241, with a mean value of -0.909 and a maximum value of 0.975. Therefore, the average RAM was -24.12 percent of the previous year's total assets at the aggregate level. Consequently, based on these dependent variables, DAC and RAM, we can conclude that on average, samples do the ABEM and are less likely to perform RAM at the aggregate level.

The average number of clients handled by each partner (NC_PARTNER) is two clients or 1.93, while at the audit firm level (NC_FIRM) is six clients, with a maximum value of 14 clients. The average number of clients handled by each partner in our data profile contrasts with Setiawan and Fitriany (2011), with an average of 44.50 per audit partner. The level of client complexity faced by each partner (CS_PARTNER) has an average of 3.77 from the maximum scale of 5, which is relatively complex. But in the other side, the number of clients at the audit firm level (CS_FIRM) is 12.09, which is calculated as the sum of the complexity levels of all clients handled by an audit firm.

The other variables are as follows. First, the mean of leverage (LEVRG) is 91.80 percent, which is relatively high in using sources of funds originating from debt. Next, twenty percent of observations were companies that experienced net losses (DLOSS), with a relatively medium and above in age (AGE), i.e., 11.7 years, and have a mean of ROA ratio of 3.19 percent.

Table 3. Descriptive Statistics

Variables	Mean	Minimum	First Quartile	Median	Third Quartile	Maximum	Standard Deviation
DAC	0.025	-0.683	-0.056	0.003	0.059	0.835	0.187
RAM	-0.241	-0.909	-0.424	-0.314	-0.141	0.975	0.368
NC_PARTNER	1.927	1.000	1.000	2.000	2.000	6.000	1.233
NC_FIRM	6.000	1.000	3.000	6.000	8.000	14.000	3.692
CS_PARTNER	3.767	1.000	2.000	3.000	5.000	13.000	2.597
CS_FIRM	12.089	1.000	5.000	12.000	18.000	28.000	7.711
DBIG4	0.202	0.000	0.000	0.000	1.000	1.000	0.401
SIZE	19.869	7.549	14.393	16.784	27.104	31.458	6.551
LEVRG	0.918	0.001	0.291	0.479	0.641	29.302	2.411
DLOSS	0.206	0.000	0.000	0.000	0.000	1.000	0.404
CFOA	0.031	-0.702	-0.012	0.028	0.086	0.435	0.106
DSALES	0.176	-1.000	-0.124	0.063	0.250	11.968	0.904
BTM	0.821	-16.086	0.394	0.791	1.739	54.720	8.415
ROA	0.032	-3.980	0.003	0.037	0.079	2.192	0.317
DROA	-0.533	-24.135	-0.763	-0.182	0.252	19.831	14.621
AGE	11.762	1.000	4.000	9.000	20.000	30.000	8.441
TACC	0.019	-0.952	-0.054	0.000	0.058	3.832	0.252

Source: Stata results. Notes: All variables are described in Table 2.

Correlation Matrix Analysis

To save space, we did not tabulate the results of the correlation analysis among all variables used in Model 1 and Model 2. Nevertheless, our result shows that NC_FIRM is negatively correlated with DAC at 0.05, while CS_FIRM is positively correlated with DAC at 0.01 level, consistent with our early prediction. Other main variables are not significantly correlated with DAC and RAM, i.e., NC_PARTNER and CS_PARTNER. Another control variable, DBIG4, has a negative correlation with DAC at the 0.05 level, indicating that the audit quality of Big Four accounting firms is negatively related to ABEM, consistent with previous studies. Companies with high leverage and loss (DLOSS) tend to carry out ABEM, as seen from the negative relationship between LEVRG and DLOSS with DAC. On the other hand, companies with a high level of liquidity (CFOA) negatively correlate with ABEM (DAC) and RAM.

Regression Results of Model 1

We use Model 1 to test the hypothesis H1a to H2b

with the test results shown in Table 4. In Table 4, the model specification of the joint test model (Column 3) has an F-value of 675.18 and a probability of p <0.001, respectively. Model 1 (Column 3) has the adjusted R-squared of 0.5788 or 57.88 percent, indicating that all independent variables can explain 57.88 percent of the dependent variable (DAC).

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Table 4, Column (1) and Column (2), respectively, also provide the regression results of the number of clients (NC_PARTNER and NC_FIRM) and the client's complexities (CS_PARTNER and CS_FIRM).

Table 4. Regression Results of Model 1

Variable	Pred. Sign	Dependent Variable: DAC					
		Number of Clients		Client Complexity		Joint Test (Model 1)	
		Column (1)		Column (2)		Column (3)	
		Coeff.	t-test	Coeff.	t-test	Coeff.	t-test
Constant	?	0.086***	3.54	0.087***	3.57	0.086***	3.61
NC_PARTNER	+	0.008**	2.30	-	-	-0.006	-0.62
NC_FIRM	+	-0.005***	-3.37	-	-	0.003	0.06
CS_PARTNER	+	-	-	0.005**	2.52	0.007	1.49
CS_FIRM	+	-	-	-0.003***	-3.60	-0.004	-1.59
DBIG4	-	-0.005	-0.44	-0.002	-0.20	-0.002	-0.08
SIZE	?	-0.002**	-2.10	-0.002**	-2.14	-0.002**	-2.18
LEVRG	-	0.004	1.54	0.005	1.52	0.005	1.48
DLOSS	-	-0.022	-0.87	-0.023	-0.88	-0.023	-0.89
CFOA	-	-0.600***	-3.16	-0.605***	-3.18	-0.607***	-3.19
DSALES	-	-0.012*	-1.89	-0.012*	-1.91	-0.012*	-1.94
BTM	+	0.001**	2.01	0.001**	1.98	0.001*	1.94
ROA	-	-0.236***	-4.85	-0.236***	-4.89	-0.236***	-4.90
DROA	-	0.000	0.27	0.000	0.26	0.000	0.26
AGE	-	0.001	1.29	0.001	1.27	0.001	1.26
RAM	?	-0.008	-0.44	-0.008	-0.41	-0.007	-0.40
TACC	+	0.341**	2.26	0.340**	2.26	0.339**	2.25
DUMYEAR	?		Yes		Yes		Yes
DUMINDUSTRY	?		Yes		Yes		Yes
N			506		506		506
F-value			611.44		708.52		675.18
p-value			<0.001		<0.001		<0.001
Adjusted R^2			0.5789		0.5802		0.5788

Source: Stata results. Notes: ***, **, * refer to significance at the 0.01, 0.05, and 0.10 levels with the two-tailed test, respectively. Column (1) and Column (2) present the regression results for the number of clients and the clients' complexity only, respectively. All variables are described in Table 2.

For instance, Table 4, Column (1) indicates that the coefficient for the number of clients at the partner level (NC_PARTNER) is 0.008, which is both positive and significant at the 0.05 level using the two-tailed test (t-test= 2.30). By comparison, the coefficient for the number of clients at the audit firm level (NC_FIRM) is -0.005, which is negative and significant at 0.01 using the two-tailed test (t-test= -3.27). However, the regression findings from the joint test (Column 3), which is our main model, indicate that both NC_PARTNER (2 = -0.006, t-test = -0.63) and NC_FIRM (3 = 0.002, t-test = 0.42) are non-significant at the 0.10 level using two-tailed testing. Thus, we found no indication that the number of clients, both at the partner level (NC_PARTNER) and at the audit firm level (NC_ FIRM), is related to audit quality as assessed by discretionary accruals when we used the joint test as our primary model (DAC).

After that, in Column (2) of Table 4, the coefficient for the client's complexity at the partner level (CS_PARTNER) is 0.005, which is both positive and significant at the 0.05 level. While the coefficient of CS_FIRM is – 0.003, negative and significant at 0.01 level. Furthermore, using the joint test of Model 1 (Column 3), we can see that the coefficient of the variables CS_PARTNER (β4 = 0.007, t-test = 1.55) and CS_FIRM (β5 = -0.004, t-test = -1.26) both are not significant at the level of 0.10 with two-tailed tests. However, because our

H2a hypothesis is directional and the t-test value of CS_PARTNER is 1.55> 1.28, which is the critical value for 0.10 significant level with the one-tailed test, we found that the CS_PARTNER is positive and significant toward the DAC at the 0.10 level with the one-tailed test.

The findings of hypothesis testing using Model 1 indicate that the number of clients handled by both partners in-charge and audit firms is unrelated to audit quality as assessed by discretionary accruals. An alternative explanation of the results of this test is probably due to the relatively small number of clients handled by each partner and audit firm, i.e., on average two clients per partner and six clients per audit firm in relation to the ABEM (discretionary accruals). In contrast to the 2011 study by Setiawan and Fitriany, each partner handled an average of 44.50 clients per year.

Meanwhile, the client complexity at the engagement partner level has a positive relationship with discretionary accruals. In other words, when clients handled by the engagement partners are increasingly complex, the engagement partners have a relatively higher workload and audit efforts, so the engagement partner's audit quality tends to decline. Out results are consistent and in line with the previous studies that found an association between the client complexity and lower audit quality from the engagement partners, especially for the short tenure of the partners (Gul et al., 2017). Furthermore, our results are consistent with the mean of the client complexities handled by partners is 3.77 from the maximum scale of 5, i.e., the highest complexity for each client, measured by the size of clients (total assets), the client's growth rate, the risk of bankruptcy, and low income. Therefore, the workload arising from the increasingly complex client will reduce the audit quality of the engagement partner.

At the audit firm level, the test findings revealed no relationship between client complexity and audit quality. An alternate explanation for this outcome is the possibility of peer review procedures conducted by other divisions of the audit firm as part of quality control at the audit firm level to mitigate the risk of low audit quality between audit divisions or engagement partners in an audit firm. The test results for the control variables are significant (SIZE, CFOA, DSALES, ROA, AGE, and TACC), as shown in. Table 4.

Regression Results of Model 2

Just as Model 1, we use Model 2 to test the hypotheses of H1a, H1b, H2a, and H2b, as seen in Table 5. The Joint test of Model 2, Column (3) has an F-value and probability of 103.65 and p <0.001, respectively, indicating that Model 2 has met the requirements for the hypotheses testing. In addition, Model 2 has an adjusted R-squared of 0.075 or 7.50 percent, indicating the ability of all independent variables to explain the dependent variable (RAM).

Table 5, Column (1) and Column (2), respectively, also provide the regression results of the number of clients (NC_PARTNER and NC_FIRM) and the client's complexities (CS_PARTNER and CS_FIRM) toward the dependent variable RAM. Table 5, Column (1) shows that the coefficient of the number of clients at the partner level (NC_PARTNER) is 0.003, not significant at 0.10 with the two-tailed test (t-test= 0.19). In comparison, the variable of the number of clients at the audit firm level (NC_FIRM) is -0.001, not significant at 0.10 with the two-tailed test (t-test= -0.02). The results of the joint test which is our main model (Model 2) in Table 5, Column (3) show that the variable of NC_PARTNER ($\alpha 2$ = 0.016, t-test = 0.38) and NC_FIRM ($\alpha 3$ = -0.026, t-test = -1.02) are all not significant at the 0.10 level. Likewise, the variables of CS_PARTNER ($\alpha 3$ = -0.005, t-test -0.25) and CS_FIRM ($\alpha 4$ = 0.012, t-test = 0.99) in Table 5, Column (3) are also not significant at the 0.10 level.

In summary, the findings of hypothesis testing using Model 2 indicate that the number of clients handled by engagement partners and audit firms, as well as the complexity of clients handled by partners and audit firms, have no relationship with the RAM as a measure of audit quality. In other words, neither the number of clients nor their complexity, at the engagement partner or audit firm level, is related to audit quality as assessed by RAM. As indicated in Table 5, the test results for the control variables in Model 2 are partially significant (e.g., BTM), and the majority are not significant.

CONCLUSION

The purpose of this study is to determine whether the number of clients and the complexity of the clients affects the audit quality of the

engagement partners and the audit quality at the firm level. Consistent with earlier research (Gul et al., 2017), we discover some indication that client complexity at the engagement partner level can impair the engagement partner's audit quality, as assessed by accrual-based earnings management.

Table 5. Regression Results of Model 2

Variable	Pred. Sign	Dependent Variable: RAM					
		Number of Clients		Client Complexity		Joint Test (Model 2)	
		Column (1)		Column (2)		Column (3)	
		Coeff.	t-test	Coeff.	t-test	Coeff.	t-test
Constant	?	-0.246***	-3.34	-0.249***	-3.53	-0.245***	-3.30
NC_PARTNER	+	0.003	0.19	-	-	0.02	0.48
NC_FIRM	+	-0.001	-0.02	-	-	-0.02	-0.98
CS_PARTNER	+	-	-	0.001	0.10	-0.01	-0.44
CS_FIRM	+	-	-	0.000	0.18	0.011	1.02
DBIG4	-	-0.044	-1.16	-0.045	-1.20	-0.059	-1.33
SIZE	?	0.001	0.32	0.001	0.32	0.001	0.37
LEVRG	-	0.014*	1.82	0.014*	1.81	0.014*	1.76
DLOSS	-	0.012	0.27	0.014	0.30	0.013	0.29
CFOA	-	-0.226	-1.00	-0.223	-0.97	-0.223	-0.97
DSALES	+	-0.001	-0.07	-0.001	-0.06	-0.223	-0.97
BTM	-	0.000***	11.24	0.000***	10.89	0.000***	10.73
ROA	-	0.031	0.51	0.031	0.50	0.028	0.45
DROA	-	-0.001	-1.18	-0.001	-1.17	-0.001	-1.14
AGE	-	-0.002	-0.78	-0.002	-0.79	-0.002	-0.77
DAC	+	-0.066	-0.44	-0.061	-0.42	-0.059	-0.40
DUMYEAR	?		Yes		Yes		Yes
DUMINDUSTRY	?		Yes		Yes		Yes
N			506		506		506
F-value			142.63		143.54		130.1
p-value			<0.001		<0.001		<0.001
Adjusted R^2			0.095		0.095		0.075

Source: Stata results. Notes: ***, **, * refer to significance at the 0.01, 0.05, and 0.10 levels with the two-tailed test, respectively. Column (1) and Column (2) present the regression results for the number of clients and the client complexity only, respectively. All variables are described in Table 2.

On the other side, our analysis showed no evidence that the number of clients handled by engagement partners or the audit firm is related to audit quality, although our findings are consistent with past research (e.g., Goodwin & Wu, 2016).

The findings of this study indicate that audit quality at the engagement partner level remains a significant concern for standard setters, capital market participants, and other stakeholders. Furthermore, violations in the practitioners concerning the audit partners, including the audit firm of the Big Four, indicate that the effectiveness of PP 20 of 2015 and problems in audit quality at the partner level have not been resolved.

Our study has the following limitations. First, the conclusions drawn from the results of this study need to be carefully considered because not all of the public companies on the Indonesia Stock Exchange are

taken as our sample, but only limited to the manufacturing sector. Thus the determination of the number of clients handled by each engagement partner and each audit firm is limited and may be misspecified. Second, this study's measurement of audit quality only uses the accrual and real transaction models, where the results are sensitive to the models used, and there is no consensus on which model is the best. Third, this study has not considered the audit tenure at the engagement partner or audit firm level. Earlier research (e.g., Carey & Simnett, 2006) revealed that short audit tenure could increase audit quality measured at the

partner level; however, Gul et al. (2017) discovered that audit quality at the partner level declines when the engagement partner's audit tenure shortens. Further study should take the constraints mentioned above into account.

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