

Heterogeneous Effects of Audit Firm Characteristics on Readability of Key Audit Matters (KAM): Evidence from Panel Quantile Regression

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ABSTRACT

The readability of KAM has been a major concern for academics; given the increasing complexity of financial reporting, the language used to explain KAM may be challenging to articulate effectively. Thus, this study was motivated to offer empirical insights into the heterogeneous effect of audit firm characteristics on KAM readability. Using the Flesch reading ease index to proxy KAM readability, this study utilised 258 FTSE100 Malaysia-listed companies from 2017 to 2019 and used the panel quantile with fixed effects regression analysis. The results showed that Big 4 audit firms, audit fees, busy season, audit firm tenure, and female partners had a significant and heterogeneous effect on the readability of KAM across low (25th), medium (50th), and upper (75th) quantile levels. However, the highest quantile (90th) demonstrated that only audit fees, busy season, and female audit partners significantly affected the conditional distribution of KAM readability. The current study also identified a heterogeneous impact of the audit committee's characteristics on the readability of KAM in Malaysia.

Keywords: Key Audit Matter, Audit Firm, KAM Readability, Quantile Regression, Malaysia

ARTICLE INFO

Article History:

Received: 24 August 2023

Accepted: 21 August 2024

Available online: 01 December 2024

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INTRODUCTION

Auditing plays a significant role in facilitating effective communication between a company and the users of the financial statement. Theoretically, the auditor's reports are prepared by independent auditors to convey various audit information. An audit report aims to communicate to investors and other users the auditor's opinion on whether or not the financial statements are fairly presented in all material respects (MIA-ISA 200, 2022). Although stakeholders consider the audit report significant, many desire additional information about the entity, the audit, and the financial statements (Mock et al., 2013). Hence, the primary objective of implementing the International Standard of Auditing (ISA) 701, which focuses on the disclosure of Key Audit Matters (KAM), is to augment the communicative efficacy of the auditor's report.

Despite widespread expectations that KAM disclosures would enhance the auditors' capacity to communicate significant information to users, recent research has reported mixed evidence. According to Fakhfakh (2015), the linguistic attribute that defines the quality of financial information is the readability of audit reports. In other words, users of financial statements should be able to read and comprehend the audit report without difficulty. Recently, the findings showed that, in general, the implementation of KAM increased the amount of written text while simultaneously decreasing the readability of the auditor's report (Marques et al., 2021). Pinto et al. (2020) and Velte (2019) have also confirmed that, on average, the readability of the expanded audit report is typically categorised between difficult to very difficult to read.

Hussin et al. (2023) found a similar result in Malaysia, focusing on the FTSE 100 companies and reported that the average KAM readability score was very difficult to read disclosure. Over time, annual reports have become increasingly complicated and information-rich, making them harder to comprehend (Deshmukh & Zhao, 2020), especially involving large and prominent companies. However, KAM readability research conducted in the UK showed a contradicting result. Smith (2023) found that post-ISA 700 audit reports were more readable even with additional risks reported. The inconsistent findings might be due to the flexible structure of KAM disclosure, and the language used to explain KAM varies between companies (Kitiwong & Sarapaivanich, 2020). ISA 701 provides no uniform guidelines and relies heavily on the auditor's professional judgment in deciding the extent of KAM reporting; therefore, audit firms play a significant role in determining the most effective ways to deliver the intended message of KAM to the users. Thus, the diverse attributes of the audit firms could potentially influence the readability of KAM reporting.

Honkamäki et al. (2022) observed that the audit reports of the Big 4 audit firms indicate heterogeneity. The reporting of the issue in management estimates and the number of audit procedures vary significantly across the Big 4 audit firms. Hence, the firm's attribute differences may lead to this non-standardised reporting within the Big 4. Similar heterogeneous results reported by Baatwah (2023) indicate considerable variability in the conditional distribution of KAM numbers across low, middle, and high quantiles for each of the Big 4 audit firms. Interestingly, Marques et al. (2021) discovered that the number of KAM reported has a heterogeneity effect on the readability of KAM, indicating a non-linear, U-shaped relationship.

High-profile corporate failures have beset Malaysia over the last twenty years, most notably the Malaysia Development Berhad (1MDB) scandal. These occurrences undermine stakeholders' confidence in the auditors' report as an impartial opinion upon which they could base well-informed investment decisions. The financial scandals and the growing intricacy of financial reporting resulted in auditors needing to furnish users of financial information with more informative audit reports and pertinent details regarding the risks faced by companies (Abad et al., 2020; IAASB, 2015). However, the absence of a standardised guideline in KAM may contribute to the disparities of central firm guidance in determining KAM's reporting style. Therefore, this study suggests that the heterogeneity in audit firm characteristics significantly impacts KAM readability.

This study addressed a topic crucial to the relevance of KAM reporting, given the principle-based approach of the ISA 701 and the significant heterogeneity of KAM readability at present. The connection between audit firm attributes and KAM reports has become extremely important in view

of the increased number of mixed evidence in these areas, which means that KAM may not have yet achieved its intended objective. Poor readability disclosure may defeat the purpose of the new expanded audit reporting. Standard setters may need to provide additional requirements to the existing ISA 701 to encourage and urge auditors to deliver more readable KAM reporting.

The subsequent sections of the paper are structured as follows. The literature review is presented in Section 2, while the research method is described in Section 3. Following this, the discussion and analysis of the main results are presented in Section 4. The study is concluded in Section 5, which provides a list of limitations.

LITERATURE REVIEW

Reporting on KAM in Malaysia

The International Auditing and Assurance Standards Board (IAASB) issued the revised ISA 701 in January 2015, following an extensive deliberation on the feedback received regarding its initial draft. During this discussion, a consensus was reached regarding the scope of the ISA 701. The board ratified its resolution to require KAM reporting for financial statement audits of publicly traded companies. The primary objective of KAM was to highlight the critical elements of the audit ‘through the eyes of the auditor’.

The Malaysian Institute of Accountants (MIA) Council endorsed this standard for publishing in April 2015 and the amended ISA 701 in July 2018. Malaysia implemented the new ISA 701 standard starting from the financial year-end on or after 15 December 2016 (MIA-ISA701 2017). Three organisations were tasked with evaluating whether the extended auditor’s report is meeting the expectations of the market: the MIA, the Audit Oversight Board (AOB) under the Securities Commission (SC), and the Association of Chartered Certified Accountants (ACCA) (MIA – Accountants Today 2018).

“KAM are defined as those matters that, in the auditor’s professional judgment, were of most significance in the audit of the financial statements of the current period and are selected from matters communicated with TCWG” (IAASB, 2015). KAM descriptions should include: “(i) why the matter was considered to be a KAM, (ii) how the matter was addressed in the audit, and (iii) reference to the related disclosure(s), if any. Description of KAM should be entity-specific and avoid being standardised or overly technical language” (IAASB, 2015).

KAM Readability

Readability is a linguistic metric that assesses the efficacy of written material and the proficiency of financial communication tools (Fakhfakh, 2015). Prior research has employed several readability metrics to evaluate and assign scores to the challenges associated with understanding KAM disclosure. The Flesch reading ease index is a prominent readability index used to assess KAM’s readability (Hussin et al., 2023; Küster, 2024; Pinto et al., 2020; Velte, 2019) and originates in the field of computational linguistics. The Fog index, devised by Robert Gunning, is a commonly employed tool for assessing readability. This metric has been utilised in recent research on KAM (Gambetta et al., 2023; Küster, 2024; Seebeck & Kaya, 2022; Smith, 2023). The Bog index, a sophisticated metric for evaluating readability, was initially developed to gauge the influence of the readability of narrative disclosures on bond ratings and debt costs. In addition, it has recently been employed in a comprehensive examination of KAM readability conducted by Gambetta et al. (2023) and Seebeck and Kaya (2022).

The issue of readability has already been examined within the domain of KAM reporting. Several recent studies have examined the determinants of KAM readability (Abdelfattah et al., 2021; Gambetta et al., 2023; Hussin et al., 2023; Küster, 2024; Marques et al., 2021; Pinto et al., 2020; Velte, 2019; Wuttichindanon & Issarawornrawanich, 2020), as well as the implications of KAM readability on various aspects, such as cost of debts (Wuttichindanon & Issarawornrawanich, 2022), and the effect of the initial adoption of ISA 700 on readability (Smith, 2023). Therefore, the current study extended this

area of knowledge by applying a panel quantile regression analysis on KAM readability in Malaysia, which has yet to be explored.

This study employed the quantile regression estimation approach, which can show the effect of audit firm characteristics on KAM readability at different conditional distributions (quantiles) instead of just its conditional mean distribution as utilised by the previous studies. This provides more clarity on the attributes' heterogeneous effect, which was not captured in-depth by the conventional statistical techniques, as these methods rely on mean effects and often incorrectly estimate the expected effect (Khan et al., 2020). Despite its advanced nature and ability to offer a more comprehensive depiction, this approach is rarely acknowledged within the existing audit literature (Baatwah, 2023).

Heterogeneity of Audit Firms and KAM Disclosures

The concept of heterogeneity in the audit firm encompasses the presence of firms with distinct characteristics and qualities that set them apart. The variational differences may arise between or among audit firms at a given time or across time. Previous studies have identified variations in KAM disclosures among the four largest audit firms. Sierra-García et al. (2019) studied UK FTSE-100 companies and observed that PwC disclosed more entity-level-risk KAM than Deloitte, EY, and KPMG. Additionally, KPMG tends to reveal a lower number of account-level-risk KAM compared to PwC. A study by Kend and Nguyen (2020) observed that PwC exhibited a higher number of KAM per audit client than other firms, with EY being the only firm that comes close in this regard. Additionally, Gambetta et al. (2023) also revealed that the KAM descriptions provided by PwC and EY are more readable than Deloitte and KPMG.

Recent studies have also revealed that the number and extent of KAM disclosures tend to differ across various industries (Rahaman & Chand, 2022). Moreover, a variation of KAM types is presented both inside and across different sectors. Honkamäki et al. (2022) also found substantial heterogeneity among the Big 4 firms regarding the type of KAM reported and the number of procedures conducted in the real estate industries. Furthermore, using a quantile regression analysis, similar findings show that the number of KAM reported varies among the Big 4 firms (Baatwah, 2023). The results also indicated heterogeneity in KAM among each firm's partners. Therefore, this study will add to the auditing literature by utilising quantile regression to identify the possible non-linear relation between audit firms' characteristics and KAM readability.

HYPOTHESIS DEVELOPMENT

Big 4 and KAM Readability

Individual auditors' characteristics may influence audit outcomes, but they are limited by the audit firm's quality-control procedures (Gul et al., 2013). Consequently, the heterogeneous effect of audit firm attributes significantly influences the KAM reporting style. A recent study discovered that the introduction of ISA 700 in the United Kingdom resulted in the release of audit reports by the Big 4 audit firms that exhibited enhanced readability and effectively conveyed entity-specific financial risk (Smith, 2023). Similarly, researchers also found a significant and positive correlation between the Big 4 audit firms and KAM readability (Velte, 2018; Wuttichindanon & Issarawornrawanich, 2020). In contrast, Deshmukh and Zhao (2020) revealed a strong association between the Big 4 firms and clients with complex financial operations that require comprehensive disclosures and technical terminology in their reports, reflecting lower readability. Furthermore, it was also observed that clients undergoing audits by one of the Big 4 firms exhibited negative associations, indicating less readability (Marques et al., 2021). Therefore, the heterogeneous results from the present study posited the following hypothesis:

H1: Big 4 have heterogeneous effects on the readability of KAM.

Audit Fees and KAM Readability

Prior researchers have confirmed the heterogeneous relationship between fees and audit quality, as higher fees have been related both to higher audit quality (due to more audit efforts) and lower audit quality (due to increased auditor dependence on the client) (Velte, 2022). Abdelfattah et al. (2020) found a positive and significant correlation between audit fees and the practice of extended audit reporting based on their analysis of a dataset comprising UK companies. However, recent studies have yielded contradictory findings (Küster, 2024; Marques et al., 2021), indicating a negative correlation between audit fees and readability, implying a lower KAM readability level. Blanco et al. (2021) and Salehi et al. (2020) also found an inverse relationship between readability and audit fees, which in turn prolonged the audit and higher chances of issuing a modified opinion. Thus, the following hypothesis was formulated:

H2: Audit fees have heterogeneous effects on the readability of KAM.

Audit Firms' Busy Season and KAM Readability

The audit busy season refers to a higher demand for audit services, driven mainly by clustering clients with identical fiscal year-ends within an auditor's client portfolio (López & Peters, 2012). According to Gul et al. (2017), audit partners holding multiple audit assignments have less time and effort to dedicate to each audit, which has a detrimental impact on audit quality. Similarly, in KAM, executing all audit procedures within the current timeframe may pose challenges, perhaps prompting auditors to reveal a greater number of KAM as a means to mitigate auditor liability (Pinto et al., 2020). However, the researchers also predicted that the opposite impact might occur because auditors are under more pressure during the busy season, and as a result, auditors may find fewer areas of risk. Salehi et al. (2022) further reported a negative association based on the Fog index, but a positive connection was observed while employing the Flesch reading ease score. As prior research results confirm the heterogeneous relationship, the subsequent hypothesis is formulated:

H3: Audit firms' busy season has heterogeneous effects on the readability of KAM.

Audit Firm Tenure and KAM Readability

Long-tenured auditors have been criticised by regulators who worry that their increased familiarity with a client could compromise their independence (Velte, 2022). Restrictions on auditor tenure are hotly debated since they allow "opinion shopping" and undermine client-specific knowledge (Chung et al., 2019). The empirical evidence is rather heterogeneous. According to Shao (2020), firms that have undergone audits for a period beyond four years tend to present a higher number and longer duration of KAM. Therefore, it may be argued that extending the duration of audit periods could benefit auditors in presenting a more comprehensible KAM report. This is because a longer audit period allows auditors to accumulate a greater depth of information, especially concerning entity-specific matters. However, there were insignificant results in the recent studies on KAM readability (Hussin et al., 2023; Pinto et al., 2020). Thus, this study proposed the following hypothesis:

H4: Audit firm tenure has heterogeneous effects on the readability of KAM.

Audit Partner Gender and KAM Readability

Previous studies (Ali Gull et al., 2018; Ho et al., 2015) have shown that female leaders tend to prioritise the interests of stakeholders over their self-interest, resulting in a greater level of transparency in annual reports. The results of this study exhibited similarities to the research conducted by Velte (2018), which demonstrated that companies with a higher proportion of women serving on their audit committees tend to provide KAM disclosures that are more easily comprehensible. Wuttichindanon and Issarawornrawanich (2020) conducted a study that found empirical evidence supporting the notion that the presence of female external auditors positively influenced the readability of KAM. Contrary to this perspective, Abdelfattah et al. (2020) presented contrasting evidence suggesting that female audit partners tend to provide extensive KAM disclosures that may be overly detailed, potentially hindering

the audit report's readability. Interestingly, based on different readability metrics, the relationship between female audit partners and KAM readability is inconsistent (Hussin et al., 2023). A positive connection was established when using Flesch reading ease scores, whereas a negative association was found when using Coleman-Liau Index. Therefore, given gender effect heterogeneity, the fifth hypothesis was:

H5: The audit partner's gender (female) has heterogeneous effects on the readability of KAM.

RESEARCH METHODOLOGY

Sample and Data Collection

The current study employed a sample of companies listed in the top 100 FTSE Bursa Malaysia Index that furnished financial data for the timeframe spanning from 2017 to 2019. This index was selected based on the fact that the included companies represented 79% of the whole market capitalisation. This study utilised annual report data from 2017 to 2019 after the implementation of ISA 701 on 15 December, 2016. Table 1 presents the final sample, with a total of 258 observations.

Table 1: Sample Composition

FTSE100 Index Companies	Observations
Listed throughout the duration of the research (2017 - 2019)	300
Annual reports are not available (seven companies)	(21)
Audit firm switches (seven companies)	(21)
Final sample containing KAM reporting for three consecutive years (86 companies)	258

Research Design and Measurements

The independent variables included audit firm size (Shao, 2020), audit fees (Hussin et al., 2023), busy season (Hussin et al., 2022), audit tenure (Shao, 2020) and partner's gender (Abdelfattah et al., 2020); meanwhile, the dependent variable was evaluated following the previous researchers' readability metric (Marques et al., 2021; Pinto et al., 2020; Velte, 2019). The readability index was calculated based on the average sentence length (measured by the number of words) and the average number of syllables per word. The Flesch reading ease index is shown in Table 2.

Table 2: Flesch Reading Ease Index (KAMREAD)

Flesch reading ease index	Descriptions
0.0–30.0	Very difficult to read
30.0-50.0	Difficult to read
50.0-60.0	Fairly difficult to read
60.0-70.0	Plain English
70.0-80.0	Fairly easy to read
80.0-90.0	Easy to read
90.0-100.0	Very easy to read

The audit committee-related variables used in earlier studies (Velte, 2019) were also controlled in this study. These variables included the audit committee size (ACSIZE), meeting frequency (ACMEET), expertise ratio on the audit committee board (ACEXPERT), and independent director ratio on the audit committee board (ACIND). The measurement of the research variables is fully described in Table 3.

Table 3: Descriptions of Variables

Dependent and test variables	
KAMREAD	The readability of the KAM disclosure section in the audit report is used to determine the degree of KAM readability (Flesch reading ease index).
BIG4	The dichotomous attribute equals 1 if a Big 4 auditor audits the company and 0 otherwise.
FEES	The natural logarithm of the audit fees paid to an external audit firm and its affiliated firm(s).
BUSY	The dichotomous attribute equals 1 if the fiscal year-end of the company is during the month of December and 0 otherwise.
TENURE	Assessed by the number of years the client has been continuously audited by the same audit firm, traced back from 2019 to 2004.
FEMALE	The dichotomous attribute equals 1 if the audit partner's gender is female and 0 otherwise.
Control variables	
PROFIT	Evaluated through return on equity (ROE) at the end of year t
SIZE	The natural logarithm of the total assets at the end of year t
LEVERAGE	Total debts divided by total assets at the end of year t
COMPLEX	Assessed by the number of segments into which the audited company business line is divided
ACSIZE	The number of audit committee members
ACIND	The ratio of independent audit committee members to total audit committee members
ACEXPERT	The ratio of audit committee members with at least accounting degrees or professional accounting qualifications to total audit committee members
ACMEET	The number of audit committee meetings

The following was the empirical model formula utilised in this study to achieve the research objective:

$$Q_t(KAMREAD_{it}) = \beta_0 + \beta_1 BIG4 + \beta_2 FEES + \beta_3 BUSY + \beta_4 TENURE + \beta_5 FEMALE + \beta_6 PROFIT + \beta_7 SIZE + \beta_8 LEVERAGE + \beta_9 COMPLEX + \beta_{10} ACSIZE + \beta_{11} ACIND + \beta_{12} ACEXPERT + \beta_{13} ACMEET + \varepsilon_{it}$$

A panel quantile with fixed effects regression analysis was used in this study to control the endogeneity issues more effectively and to be more resistant to outliers (Koenker, 2004). The advantage of employing this model is that it may demonstrate the various effects of the independent variables on the response at different quantiles. The conditional distribution of the dependent variable at various quantiles is denoted by the symbol Q_t , in which t represents the quantile at 25th (lower quantile), 50th (medium quantile), 75th and 90th (higher quantile). These quantile thresholds were selected to be consistent with previous studies on KAM using the same analysis on panel quantile regression (Baatwah, 2022). Additionally, significant variations may be seen in the values of the dependent variable (KAMREAD) at these quantiles.

RESULTS AND DISCUSSION

Descriptive Analysis

The descriptive statistics as in in Table 4 revealed that the mean KAM readability index was 30.798, suggesting that the disclosure is difficult to read. A total of 68 companies listed on the FTSE100 index had enlisted the services of the Big 4 audit firms, representing a proportion of around 79.31 per cent. The mean audit charge for the sample was RM7.252 million. The average tenure of audit firms (within the same company) was ten years. The proportion of firms audited by a female partner was approximately 18.6 percent, representing 12 out of 86 companies.

Table 4: Descriptive Statistics

Variables	Mean	Std. Dev.	Min	Max
KAMREAD	30.798	8.545	2.800	51.100
BIG4	0.791	0.408	0.000	1.000
FEES	7.252	1.305	4.489	10.320
BUSY	0.558	0.498	0.000	1.000
TENURE	10.360	4.931	1.000	17.000
FEMALE	0.186	0.390	0.000	1.000
PROFIT	19.613	35.062	-51.980	284.53
SIZE	16.005	1.776	12.783	20.541
LEVERAGE	0.254	0.173	0.000	0.685
COMPLEX	3.360	1.565	1.000	9.000
ACSIZE	3.519	0.696	3.000	6.000
ACIND	0.891	0.147	0.500	1.000
ACEPERT	0.478	0.214	0.000	1.000
ACMEET	6.322	3.300	1.000	24.000

The Pearson correlation indicators showed no evidence of multicollinearity between the independent variables, as shown in Table 5. The correlations with the other explanatory variables are below 0.295, with Big 4 and audit fees showing the strongest association at 0.295. The mean-variance inflation factor (VIF) (not tabulated) of this study's model was 1.63. Therefore, no multicollinearity issues were present in the model, as indicated by the correlation matrix and the VIF of the study variables.

Table 5: Pearson Correlation Matrix

VARIABLES	KAM READ	BIG4	FEES	BUSY	TENURE	FEMALE	PROFIT	SIZE	LEV	COM	AC SIZE	AC IND	AC EXP	AC MEET
KAMREAD	1.000													
BIG4	0.156**	1.000												
FEES	0.090	0.295***	1.000											
BUSY	-0.002	0.290***	0.104*	1.000										
TENURE	0.112*	0.194***	0.190***	0.008	1.000									
FEMALE	0.081	0.246***	0.205***	0.125**	-0.084	1.000								
PROFIT	-0.175***	0.051	-0.229***	0.045	-0.107*	0.016	1.000							
SIZE	0.157**	0.320***	0.764***	0.136**	0.228***	0.161***	-0.275***	1.000						
LEVERAGE	-0.213***	-0.055	0.284***	-0.049	-0.046	0.012	0.034	0.186***	1.000					
COMPLEX	0.038	-0.052	0.431***	0.070	0.112*	0.209***	-0.241***	0.519***	0.110*	1.000				
ACSIZE	-0.018	0.056	0.048	-0.088	-0.048	-0.171***	0.045	0.150**	0.022	0.056	1.000			
ACIND	-0.023	-0.215***	0.011	-0.322***	0.033	-0.017	-0.171***	-0.029	-0.062	0.030	-0.101*	1.000		
ACEXP	0.101*	0.107*	0.075	0.014	0.121*	0.081	-0.085	0.008	-0.223***	-0.023	-0.226***	-0.097	1.000	
ACMEET	0.144**	0.146**	0.377***	0.082	0.016	-0.074	-0.163***	0.571***	-0.038	0.304***	0.188***	0.052	-0.109*	1.000

Note: *** p<0.01, ** p<0.05, * p<0.1

Quantiles Regression Results and Discussion

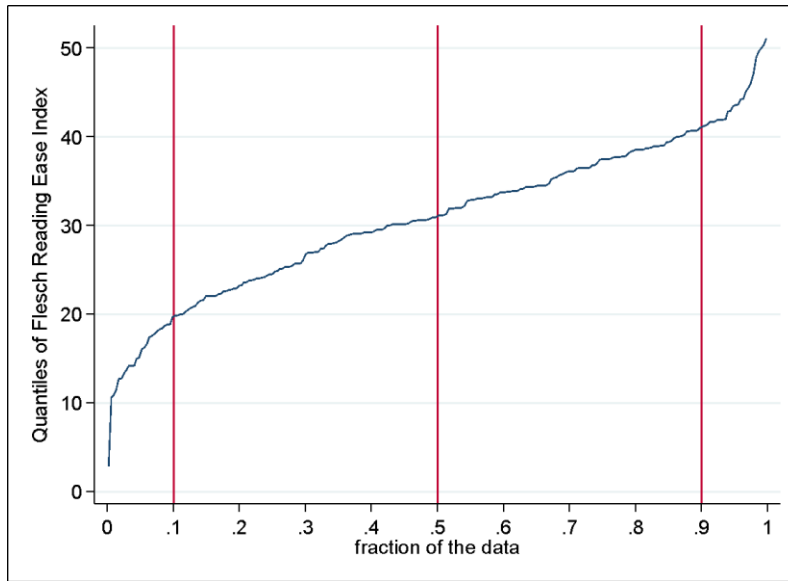


Figure 1: Quantiles of KAMREAD (Flesch Reading Ease Index)

Figure 1 illustrates the plot of the conditional distributions of KAMREAD. There was a need to carry out a quantile regression, as the conditional distribution of the dependent variables is asymmetric. Table 6 reports the panel quantile fixed effects regression by estimating the KAMREAD equation at four quantiles, namely the 25th, 50th, 75th and 90th quantiles, using the Flesch reading ease index and explanatory variables. A recent study demonstrated the interpretation of the fundamental assumption that quantiles matter in the relationship between Big 4 audit firms and the number of KAM reporting owing to the non-linear influence of these audit firms (Baatwah, 2022; Honkamäki et al., 2022). Therefore, the panel quantile regression used in this study may discover the non-linear effect via the coefficients of the audit firm attributes.

The variation in the impact of the explanatory variables towards low, medium, and high levels of the KAMREAD index implied that H1, H2, H3, H4 and H5 were supported, as shown in Table 6. The quantile regression results showed that the positive influence of the BIG4 only held when KAMREAD was in the 25th and 50th quantiles, which was highly significant at the 1% level. This indicated that for companies with low and medium levels of KAMREAD, the presence of BIG4 tended to increase their readability. BIG4 audit firms tended to have greater resources and industry-specific expertise than small and medium-sized ones (Velte, 2019). However, a negative relationship with a similar significance level was discovered only at the 75th quantile, indicating that in companies with high KAMREAD levels, BIG4 reduced the readability of KAM. This could be related to the implementation of ISA 700, which caused audit reports to become lengthier (Gutierrez et al., 2018). BIG4 clients in the FTSE 100 commonly operated in complex and regulated sectors, leading to a higher demand for detailed KAM disclosure in their audit reports, which may have deteriorated the KAMREAD index.

With regards to FEES, the results largely showed it has significant and negative coefficients in all quantiles except the last upper quantile. In line with a prior study by Küster (2024), the results implied that increased audit fees were associated with a less readable KAM. Higher fees indicated greater audit effort and quality, particularly for KAM, which called for additional descriptions of the significant matters during the current year's audit. However, KAM that addressed highly complex matters may require the utilisation of relatively more technical language, potentially diminishing their readability (Marques et al., 2021). Lengthy explanations and complicated words were categorised as difficult words under the readability metrics. In contrast, a highly significant and positive association between audit fees and KAMREAD at the very high conditional distribution indicated higher audit effort in ensuring the readers understand the KAM. A similar association was found by Salehi et al. (2020) between financial statements' readability and audit fees, whereby auditors were willing to charge their clients higher audit fees if their financial statements are easy to read.

Negative coefficients were found to be significant for BUSY at 1% at the lower quantile and upper level at the 75th quantile. This supported the theory that audit partners with a short timeline and high-pressure workload were more likely to compromise on the quality of the audit output (Gul et al., 2017). Contrary to what was expected a priori, the results in the 50th and 90th quantiles did not show a worsening KAMREAD effect of the audit firm’s busy season. A positive effect with a significant level at 1% of the busy season on KAMREAD implied that workload improved the quality of the audit report. Seebeck and Kaya (2022) also reported a similar positive relationship, adopting the exact readability measurement.

Meanwhile, a positive association was reported at the 50th and 75th conditional distribution between TENURE and KAMREAD, with a significant level of 1%. This indicated that longer tenure resulted in increased KAMREAD owing to the continual accumulation of information, especially about entity-specific problems pertaining to the client. On the contrary, a negative correlation at the 1% significant level was seen in the lower quantile, suggesting that longer firm tenure may compromise the readability of KAM.

In the 25th to 75th quantiles, the presence of FEMALE tended to have a positive and significant link with KAMREAD at 1%, demonstrating that female partners typically reported more readable KAM disclosures than male partners. Women partners were less likely to turn to aggressive means when presenting complicated reports, which results in KAM disclosures that are easier to understand. This finding aligned with the previous researchers, which found that the presence of female partners was associated with an improvement in KAMREAD scores, as measured by the same readability metric (Hussin et al., 2023; Wuttichindanon & Issarawornrawanich, 2020). However, similar to Abdelfattah et al. (2020), the highest quantile revealed a contradicting result suggesting a positive influence on readability upon engaging male partners.

In terms of the impact of firm-related control variables, PROFIT was highly significant and negatively linked with KAMREAD at all quantile levels. A similar inverse relationship with a significant level at 1% was identified between LEVERAGE, COMPLEX, and KAMREAD for all quantiles except the 75th quantile for complexity. Wuttichindanon and Issarawornrawanich (2020) noted that legal jargon and lengthy explanations might lower readability scores for organisations with higher leverage ratios due to debt covenants or going concern difficulties. The findings also revealed a positive association between SIZE and KAMREAD at the lower quantile, consistent with past studies (Pinto et al., 2020). In contrast, a negative relationship was found between the same variables at the upper quantile levels.

Furthermore, within the audit committee variables, ACMEET was positively associated with KAMREAD at the 1% level at the 25th, 50th, and 75th quantiles. This was consistent with Velte’s (2019) findings that regular committee meetings may enhance information communication inside a corporation. Meanwhile, ACSIZE and ACIND were discovered to be positively connected with KAMREAD at lower levels, with a significant threshold of 5% and 1%, respectively. However, the upper level showed an opposite significant correlation between these variables and KAMREAD.

Table 6: Result of Quantiles (Q) Regression (DV: KAMREAD)

VARIABLES	LOW	MEDIUM	HIGH	
	(1)	(2)	(3)	(4)
	Q25	Q50	Q75	Q90
BIG4	3.477*** (0.150)	3.924*** (0.200)	-0.689*** (0.208)	-0.144 (0.366)
FEES	-0.889*** (0.0481)	-0.512** (0.213)	-0.570*** (0.104)	0.495*** (0.162)
BUSY	-0.376*** (0.135)	1.306*** (0.240)	-0.557*** (0.146)	1.063*** (0.293)
TENURE	-0.0606*** (0.0102)	0.181*** (0.0221)	0.335*** (0.0174)	0.0280 (0.0174)

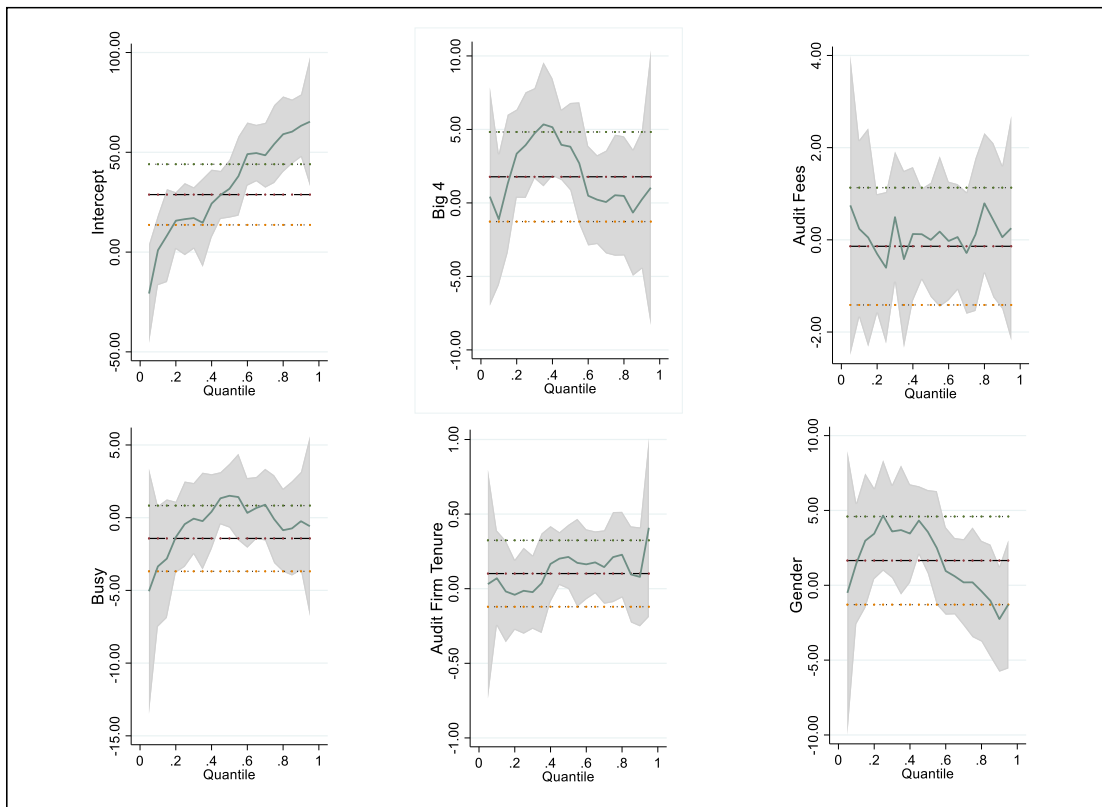
Heterogeneous Effects of Audit Firm Characteristics on Readability of Key Audit Matters (KAM)

FEMALE	5.122*** (0.177)	3.293*** (0.323)	1.555*** (0.154)	-2.936*** (0.356)
PROFIT	-0.0330*** (0.000922)	-0.0475*** (0.00177)	-0.0767*** (0.00125)	-0.0679*** (0.00354)
SIZE	1.208*** (0.0389)	0.145 (0.116)	-0.346*** (0.0545)	-0.753*** (0.0788)
LEVERAGE	-13.12*** (0.180)	-9.980*** (0.777)	-11.91*** (1.049)	-14.49*** (0.855)
COMPLEX	-0.613*** (0.0255)	-0.327*** (0.0897)	-0.0991 (0.116)	-0.583*** (0.129)
ACSIZE	0.167** (0.0786)	-0.0519 (0.155)	-1.443*** (0.175)	-0.658*** (0.0600)
ACIND	1.594*** (0.165)	-2.267*** (0.474)	-5.358*** (0.822)	-3.026*** (0.414)
ACEXPERT	-4.036*** (0.213)	1.649*** (0.554)	-0.714 (0.536)	-1.744*** (0.265)
ACMEET	0.0848*** (0.0117)	0.371*** (0.0234)	0.329*** (0.0370)	-0.00238 (0.0412)
Observations	258	258	258	258

Note: Standard errors are in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Figure 2 illustrates six plots: the estimated coefficient of INTERCEPT and the explanatory variables, BIG4, FEES, BUSY, TENURE and FEMALE. Each plot indicated the variance in the magnitude of parameters, which, in turn, implied that the effects of the audit firm attribute on KAM readability vary with the quantile levels.

Figure 2: Estimated Coefficients of the Audit Firm Attribute on KAMREAD



CONCLUSION

Evaluating the language consequences of ISA 701 was significant because it would provide empirical information on whether the standard achieved its goal of increasing audit report communicative value for financial statement users. A more readable KAM, as opposed to a less readable KAM, would substantially increase investors' understanding of the information provided in the underlying financial report (Abdelfattah et al., 2020).

The present study investigated audit firms' heterogeneity in KAM reporting readability using a robust panel quantile fixed effects regression analysis. The findings confirmed the hypotheses that Big 4, audit fees, busy season, audit firm tenure, and female partners have a significant and heterogeneous effect on the readability of KAM across quantiles. Big 4 auditors demonstrated a higher level of readability in their KAM reports within the lower and medium quantiles. However, an opposing outcome was observed in the higher quantile. The relationship between fees and KAM readability exhibited a negative correlation across all quantiles, with the exception of the 90th quantile. The busy season yielded varied outcomes, exhibiting favourable impacts in the medium and upper quantiles while demonstrating a detrimental effect in the 25th and 75th quantiles. Longer firm tenure was associated with improved readability KAM in the middle and upper quantiles. Finally, female partners often exhibited a higher level of readability in their KAM reports, with the exclusion of the 90th quantile. These heterogeneous results validated the mixed findings of several studies adopting a linear relationship model. Additionally, as audit committees oversee KAM reporting, frequent audit committee meetings had a beneficial impact on promoting a more readable KAM.

This research adds to the existing knowledge on the influence of audit firm characteristics on the readability of KAM in Malaysia. Using a similar readability metric, Hussin et al. (2023) found that only female audit partners substantially impact KAM readability in the FTSE100 using a linear relationship model. Hence, this study further examined the heterogeneous effect of audit firm attributes on KAM readability using a panel quantile with fixed effect regressions, which would allow more robust findings on KAM reporting. The use of panel quantile regression may identify some unobserved heterogeneity or individual-specific sources of variability that were not sufficiently controlled for by other covariates in the model (Koenker, 2004).

This study encountered specific limitations. The study conclusions may not be widely applicable as only the top 100 Malaysian companies were chosen for data analysis. Future research could benefit from using a larger sample size and more extended observation periods to determine how much this result applies to the general population. Expanding the study results could involve investigating other characteristics affecting KAM disclosure, like audit firm industry knowledge, industry specialisation, and experience. Potential researchers could conduct qualitative research on the influence of audit partners on KAM disclosure to gain insights into the reasons and methods behind variations in KAM readability.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the financial support from the Faculty of Accountancy, Puncak Alam Campus, Universiti Teknologi MARA (UiTM), Malaysia.

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