

Article

Towards transparent financial reporting: Analyzing the effects of audit firm and key audit matters type on audit report quality

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Copyright © 2024 by author(s). Journal of Infrastructure, Policy and Development is published by EnPress Publisher, LLC. This work is licensed under the Creative Commons Attribution (CC BY) license. https://creativecommons.org/licenses/ by/4.0/ **Abstract:** This study investigates the interaction between audit firms and key audit matters (KAMs) to measure their impact on financial reporting quality in Palestine, thereby enriching the discourse on financial reporting. A descriptive statistical method was used to analyze the audit reports of listed Palestinian firms from 2018 to 2022. A methodology that scrutinizes the clarity and informativeness of KAMs across different audit firms and KAM types, the research investigates how audit procedures and risk assessments contribute to the comprehensibility of KAM disclosures. The findings highlight a significant disparity in the readability of KAMs attributable to audit firm selection, with the non-Big Four firms exhibiting distinct approaches. This understanding, gathered through multivariate analysis, offers valuable contributions to the ongoing discourse on financial reporting quality, emphasizing the essential role of audit firms in shaping the effectiveness of audit reports and KAM disclosures.

Keywords: audit report; financial reporting; ISA 701; reporting quality; key audit matters (KAM); key audit type; (KAM) readability

1. Introduction

Financial audits have gained increasing importance in ensuring accurate and clear financial reporting for informed economic decisions (Pietronudo et al., 2022). Central to this discussion is the interaction between audit firms and the reporting of key audit matters (KAMs), a pivotal element in enhancing financial reporting practices (DeFond et al., 2002; Rahaman et al., 2022).

In 2015, the International Auditing and Assurance Standards Board (IAASB) introduced significant changes to enhance the quality and informativeness of audit reports through the ISA 700 series, particularly ISA 701 (IAASB, 2015). This standard mandated the inclusion of KAMs, highlighting critical audit matters deemed significant by auditors (Maroun and Duboisée de Ricquebourg, 2023; Rousseau and Zehms, 2024). The introduction of KAMs aims to bridge the expectation gap by providing stakeholders with deeper insights into a company's financial condition and prospects, thereby improving transparency and understanding (Dobija et al., 2013; Shoja et al., 2024).

This study focuses on Palestine's unique economic and regulatory environment and explores how audit firms adapt to these challenges and contribute to financial reporting transparency and quality (Quattrone, 2021). By investigating the impact of KAM disclosures on financial reporting quality in Palestine, this study addresses a significant research gap and offers insights applicable to emerging markets. It assesses how effectively KAMs are implemented and understood, with implications for regulators, auditors, investors, and policymakers in promoting financial transparency and ethical conduct within the audit profession.

This study is grounded in agency, institutional, and self-presentation theories. Agency theory highlights auditors' role in mitigating conflicts of interest through clear communication of key audit matters (KAMs) (Bendickson et al., 2016; Berle and Means, 2009).

Institutional theory explains how audit firms in Palestine conform to regulatory pressures to maintain legitimacy (Alia et al., 2024; Faza' and Badwan, 2024). Self-presentation theory emphasizes the importance of auditors demonstrating competence through KAM disclosures to build trust with stakeholders (Goffman, 1959). These theories collectively inform the exploration of KAM disclosure and financial reporting quality in Palestine.

Given these considerations, this study proposes research questions that evaluate both the clarity of KAM disclosures and the comprehensibility of audit procedures, with the aim of enhancing stakeholder understanding and confidence in audit reports. Given the insights provided above, we propose that an audit firm assesses not only the clarity of the KAMs presented but also the comprehensibility of the audit procedures outlined. Specifically, the literature highlights the importance of readability and clear communication in financial reporting, particularly in complex environments, such as Palestine. Studies by Maroun and Duboisée (2023) and Rainsbury et al. (2024) underscore the need for simplified language in KAMs to ensure that they are accessible to a broad audience, including non-experts. Furthermore, research by Lennox et al. (2023) on the communicative value of KAMs in conveying significant risks and audit procedures directly inform the framing of our research questions. Accordingly, the following research questions were proposed:

RQ1: Does the type of disclosed key audit matter (KAM) affect the readability of the auditor's description of the KAM procedure in Palestine?

RQ 2: Does the audit firm affect the readability of the KAM presented in the audit report in Palestine?

RQ 3: Does the audit firm in Palestine affect the readability of the auditor's description of the KAM procedures?

Based on the research questions, theoretical framework, and study context, we propose the following hypotheses: These hypotheses address the research questions and align with the theories underlying our study.

H1: The type of disclosed key audit matter (KAM) significantly affects the readability of the auditor's description of the KAM procedure in Palestine.

H2: The audit firm significantly affects the readability of the KAM presented in the audit report in Palestine.

H3: The audit firm significantly affects the readability of the auditor's description of the KAM procedures in Palestine.

These hypotheses aim to empirically test the relationships between the identified variables, guided by agency, institutional, and self-presentation theories. The subsequent sections will provide a deeper understanding of the literature and the theoretical background that informs these hypotheses.

2. Literature review and theoretical background

2.1. Underpinning theories

This study applies the self-presentation theory (Goffman, 1959), agency theory (Mitnick, 1974), and institutional theory (Meyer and Rowan, 1977) as its foundational framework. Agency theory emphasizes auditors' need to act in clients' best interests while maintaining their independence (DeAngelo, 1981; Njagi, 2023). Key audit matters (KAM) highlight potential conflicts of interest and require clear communication to mitigate agency conflicts. Institutional theory explains how audit firms conform to regulatory and stakeholder pressures to maintain legitimacy (Aschauer and Quick, 2024). Self-presentation theory underscores the importance of auditors demonstrating competence and integrity through KAM disclosures to enhance their professional reputation (Al Lawati and Hussainey, 2022). Balancing self-presentation and objectivity is crucial for avoiding bias (Detzen et al., 2023). This study investigates how Palestinian audit firms navigate KAM disclosure and litigation risk, contributing to a broader discussion of financial reporting quality in this unique context.

These theories - self-presentation theory, agency theory, and institutional theory—are not only relevant independently, but also interrelated in understanding the audit process. Agency theory provides a foundational understanding of the conflicts of interest that KAMs aim to address, while institutional theory helps explain how auditors' behaviors are shaped by regulatory pressure (Meyer and Rowan, 1977). Self-presentation theory complements this by highlighting auditors' motivations to communicate effectively through KAMs to maintain their professional reputations (Goffman, 1959; Al Lawati and Hussainey, 2022). Together, these theories provide a comprehensive framework for analyzing how KAM disclosures impact financial reporting quality, particularly in complex environments such as Palestine (Alslaibi and Abdalkarim, 2024; DeAngelo, 1981).

2.2. Financial reporting quality

Building on theoretical frameworks, the quality of financial reporting is crucial for mitigating agency conflicts and maintaining institutional legitimacy (DeAngelo, 1981; Gurbanli, 2024). Accurate and reliable financial reporting supports informed decision making, which is essential for stakeholders who rely on auditors to provide clarity on financial matters through KAMs (Pham et al., 2023; Yulianto et al., 2024). Therefore, the interaction between financial reporting quality and KAMs is central to ensuring transparency and trust in financial disclosures, especially within the unique regulatory environment of Palestine (Rainsbury et al., 2024).

Scholars define financial reporting quality as the accuracy with which financial statements reflect an entity's performance and position (Pham et al., 2023; Yulianto et al., 2024). Key dimensions include reliability, relevance, comparability, and understandability (Fera et al., 2022). This is crucial for informed decision-making (Khan et al., 2023). Theoretical frameworks based on agency and institutional theories help explain the motivations behind financial reporting quality (Gurbanli, 2024), whereas empirical research explores its determinants and outcomes.

2.3. Key audit matters (KAMs) and KAMs readability

The inclusion of key audit matters (KAMs) in audit reports marks a significant enhancement in auditor-stakeholder communication, as mandated by ISA 701 (IAASB 2015). KAMs highlight areas deemed significant by auditors during the audit process, thereby improving financial reporting quality (Rezaee and Homayoun, 2024). Building on Simunic's (1980) foundation of auditor communication, recent studies, such as those by DeFond and Lennox (2011), emphasize the informative value of KAMs in conveying significant risks and audit procedures to stakeholders (Liao et al., 2023). These findings support the need to explore the readability of KAMs in different contexts, such as in Palestine, to ensure effective communication.

KAMs, as mandated by ISA 701, embody the principles discussed in agency and self-presentation theories (Berle and Means, 2009; IAASB, 2015). They are designed to address potential conflicts of interest by enhancing the transparency of the audit process (Rahaman et al., 2022; Rezaee and Homayoun, 2024). The readability of KAMs is essential to ensure that these disclosures fulfill their intended purpose by informing stakeholders and mitigating the expectation gap (Farooq et al., 2023; Maroun and Duboisée de Ricquebourg, 2023). This section extends the discussion on financial reporting quality by focusing on how the clarity of KAMs can influence stakeholders' understanding and trust, particularly in a Palestinian context, where economic and regulatory challenges add layers of complexity (Lennox et al., 2023).

Lennox et al. (2023) find that KAMs provide a means to communicate complex information about financial statement audits, especially when the financial statements themselves are complex. This is particularly relevant in Palestine where unique economic and regulatory challenges exist. Garcia-Meca's research on the first-year implementation of KAM globally highlights its growing importance in audit practices (Rainsbury et al., 2024). This literature underpins our first research question of whether the type of disclosed KAM affects the readability of the auditor's description of the KAM procedure.

The readability of KAMs is crucial for ensuring clear communication with stakeholders, involving the use of plain language to make complex audit issues understandable (Rainsbury et al., 2024). Terms like "materiality" and "misstatement" can be challenging for non-experts (Maroun and Duboisée de Ricquebourg, 2023). Simplifying KAMs involves avoiding jargon, breaking down complex concepts, and providing context (Farooq et al., 2023; Huang et al., 2024). These strategies enhance transparency and trust in audit reports by making KAMs more accessible and comprehensible to investors, regulators, and other stakeholders (de Villiers et al., 2023). This is directly relevant to our second and third research questions, which examine the role of audit firms in influencing the readability of KAMs in Palestinian reports.

2.4. Audit profession in the Palestinian context

The Palestinian audit context adds another dimension to the discussion of KAM readability and financial reporting quality. Diverse types of audit firms, ranging from global giants to local firms, reflect varying capacities to navigate the regulatory and economic challenges unique to Palestine (Darwish, 2022; Ojra, 2014). Institutional

theory is particularly relevant here, as it explains how these firms conform to or resist pressure from both local and international standards (Meyer and Rowan, 1977). This section builds on the previous discussion by exploring how these firm characteristics may impact the effectiveness and readability of KAM disclosures, which are crucial for maintaining stakeholder confidence in a politically sensitive environment (Ismail, 2024).

In Palestine, audit firms are categorized by size, service scope, and client demographics, reflecting global trends (Ojra, 2014). The Big Four firms (Deloitte, PwC, EY, and KPMG) serve multinational corporations and large local enterprises, offering extensive services and global reach (Alslaibi and Abdalkarim, 2024). Midtier firms cater to medium and large local businesses, often with international ties, while local firms focus on small- and medium-sized enterprises with personalized services and local expertise (Darwish, 2022). Technological advancements, social responsibility, and ethical practices are crucial to improving audit quality in Palestine's politically sensitive environment. Adherence to the International Standards on Auditing (ISA) by the IAASB ensures that auditors maintain objectivity, independence, and professional skepticism. Regulatory oversight from the Palestinian Association of Certified Public Accountants (PACPA) ensures compliance, ethical conduct, and continuous education, thus enhancing audit service quality (Ismail, 2024). This contextual information supports our exploration of how different types of audit firms may influence the readability of KAMs, aligning with our research question.

2.5. Audit quality and risk threat

Audit quality, influenced by the potential for litigation and the broader institutional environment, ties back to the core themes of agency and institutional theories (DeAngelo, 1981; Hung, 2023). The threat of litigation serves as a mechanism that reinforces the importance of due diligence in KAM disclosures (Qi and Yuan, 2023). This, in turn, impacts financial reporting quality, as auditors must balance the need for comprehensive communication with the risk of legal impact (Rezaee and Homayoun, 2024). By integrating these insights, this section deepens the understanding of how audit quality concerns influence KAM readability and the overall transparency of financial reporting in Palestine (Hung, 2023; Alslaibi and Abdalkarim, 2024).

The anticipation of litigation serves as a disciplinary mechanism, ensuring that auditors exercise due care and diligence in their work to minimize the risk of legal repercussions (Qi and Yuan, 2023). In the context of audit quality, DeAngelo (1981) introduced the concept of "audit risk model," emphasizing the trade-off between audit effort and litigation risk. The institutional environment plays a crucial role in influencing auditors' responses to litigation risk. Varying regulatory landscapes across countries can affect audit firm behavior regarding litigation risk and audit quality (Hung, 2023).

3. Research design and methodology

In this section, we describe the data collection process and the criteria used for selecting our sample, which are essential for ensuring the reliability and representativeness of our study's results. This study adopts a quantitative research design to examine the relationship between audit firms, content of key audit matters (KAMs), and quality of audit reports in Palestine.

3.1. Sample selection and data collection

Financial statements audited during the 2018–2022 period was gathered from the Palestine exchange website for listed companies. KAMs, along with financial and company information and details about audit firms, were extracted from these statements and systematically cataloged in a STATA database. The sample selection for this study was based on companies listed on the Palestine Exchange Index, specifically targeting the financial information reported between 2018 and 2022.

The initial pool consists of 245 companies. This timeframe was selected because it followed the global initiation of KAM reporting in 2017. During this five-year period, the Palestinian regulator and stakeholders in general had no benchmark with which to compare Palestinian auditors regarding KAM disclosure. Companies that did not release financial information during the study period were excluded from the study. Therefore, the final sample included 320 KAMs reported by 45 companies during the 2018–2022 period. **Tables 1** and **2** present the sample selections.

Palestine Exchange (PE) Index companies	Observations
Listed throughout study period of 2018–2022 (49 companies)	245
No expanded audit report (4 companies)	-20
Total sample with KAM disclosure (45 companies)	225

Table 1. Composition of sample.

KAM (n)	2018	2019	2020	2021	2022	Total
0	6	2	6	4	8	26
1	22	27	23	28	26	126
2	7	9	8	6	4	34
3	8	4	7	6	6	31
4	2	2	1	1	1	7
5	0	1	0	0	0	1
Total	45	45	45	45	45	225

Table 2. Number of companies per year and number of KAM.

Data on financial performance indicators (LEVERAGE and ROA) were obtained from audited financial statements. Additionally, a comprehensive content analysis of each audit report was conducted and the findings were compiled in an Excel database. This process involved summarizing KAMs and describing the audit procedures applied to each of the 320 KAMs included in this study. The readability of the text, specifically for each KAM description and the related audit procedure, was evaluated using the FOG index. This calculation was performed using the open-source software OSMAN (Open-Source Metric for Measuring Arabic Narratives) (El-Haj and Rayson, 2016), which was featured in a full paper at the LREC 2016 conference in Slovenia by El-Haj and Rayson. In addition to the FOG index, the Automated Readability Index (ARI) (Gambetta et al., 2023) was calculated using the same software. We believe that these indices are particularly appropriate for analyzing the technical nature of the information under consideration, as discussed further in the research model section.

3.2. Research models

The research questions were examined through models employing ordinary least squares and multiple regression analysis.

FOG/ARIKAMMATTER_{*i*,*t*} = $\beta_0 + \beta_1 AUDITOR_{i,t} + \beta_2 SWITCH_{i,t} + \beta_3 SPECIALIST_i + \beta_4 SIZE_{i,t} + \beta_5 LEVERAGE_{i,t} + \beta_6 ROA_{i,t} + \beta_7 YEARS_{i,t} + \beta_8 INDUSTRY_{i,t} + \varepsilon_{i,t}$ (1)

 $FOG/ARIKAMPROCEDURES_{i,t} = \beta_0 + \beta_1 AUDITOR_{i,t} + \beta_2 KAMTYPE_{i,t} + \beta_3 SWITCH_{i,t} + \beta_4 SPECIALIST_i + \beta_5 SIZE_{i,t} + \beta_6 LEVERAGE_{i,t} + \beta_7 ROA_{i,t} + \beta_8 YEARS_{i,t} + \beta_9 INDUSTRY_{i,t} + \varepsilon_{i,t}$ (2)

Model 1 tests RQ2 while Model 2 tests RQ1 and RQ3.

3.3. Variables measurement

3.3.1. Dependent variables

Numerous accounting and auditing studies have used different indices to assess the readability of narrative disclosures (Ajina et al., 2016; Courtis, 1998; Sydserff and Weetman, 1999; Wang et al., 2018). However, there is a lack of consensus on the most effective (Sattari et al., 2019). The first measure chosen for this analysis was the FOG index developed by Gunning in 1952 (Flory et al., 1992), for several key reasons. First, the FOG index gauges linguistic complexity based on the average number of syllables per word and the average words per sentence (Li, 2008). Second, it estimates the years of formal education required to comprehend a text during the first reading (Courtis, 1998). Generally, a higher FOG index score indicates a more challenging readability. Lehavy et al. (2011) noted that the FOG index is an objective measure that is applicable to narrative texts. This measure is essential in the Palestinian context, where varying levels of financial literacy among stakeholders can affect the effectiveness of KAM communication (El-Haj and Rayson, 2016).

In addition to the FOG index, Brink and Lee (2015) incorporated two alternative metrics suggested by Loughran and McDonald (2020): 'vocabulary,' which measures the uniqueness of words in an audit report relative to a master dictionary, and 'financial jargon,' defined by the frequency of words from Campbell R. Harvey's Hypertextual Finance Glossary (Palmer et al., n.d.). Given the diverse audience of Palestinian audit reports, including investors and regulators with varying expertise, this combined use of FOG and ARI ensures a thorough assessment of how KAMs are presented (Maroun and Duboisée de Ricquebourg, 2023).

The FOG index has been increasingly used in studies related to accounting, finance, and non-financial information (Rautiainen et al., 2021; Kokina and Blanchette, 2019), making it easier to compare our results with those of previous studies. The FOG index is calculated based on the proportion of polysyllabic words (words with three or more syllables) in a text. This measure considers sentence length

and percentage of complex words. A higher score on this index signifies greater complexity, and consequently, lower readability. The index combines two factors that are totaled and multiplied by a constant to estimate reading grade level. In this formula, higher values indicate a lower readability.

FOGindex = 0.4(averagenumberofwordspersentence + percentageofcomplexwords)

Words consisting of three or more syllables were categorized as complex words. Variations in the FOG index values reflect the differing complexity levels of the information, if there are noticeable differences in the index values among the KAMs being studied. The Automated Readability Index (ARI) served as the second measure for assessing readability. Originally developed for evaluating the readability of materials used by the US Air Force (Smith and Senter, 1967), ARI was calculated as follows:

ARIindex = 4.71(characters/words + 0.5 (words/sentences) - 21.43

This index is a language-neutral measure that utilizes characters per word as its basis rather than the more common syllable-per-word approach. In Models 1A and 1 B, the variables 'FOG KAM MATTER' and 'ARI KAM MATTER' denote readability scores determined using the FOG and ARI indices, respectively. These scores pertain to the content of the matter described in the audit reports of each KAM. In Models 2A and 2B, 'FOG KAM PROCEDURES' and 'ARI KAM PROCEDURES' represent the readability scores, again calculated using the FOG and ARI indexes, but this time related to the descriptions of the audit procedures executed for each KAM. For the FOG index, a score ranging from 12 to 14 suggests that the text is understandable to its target audience, whereas scores above 18 indicate a high level of reading difficulty. Higher ARI scores correlated with decreased readability. The result was a numerical score correlated with a specific grade level. For example, an ARI score of 6.0 indicates the text is readable by a 6th grader, while a score of 12.0 suggests a text fits a 12thgrade level. While the FOG Index and ARI offer valuable insights, incorporating additional measures, such as the SMOG Index, which predicts the education level needed to understand text (Mc Laughlin, 1969), and the Flesch-Kincaid Grade Level, which focuses on word and sentence length (Flesch, 1948), could further validate the findings. These additional measures could help ensure a comprehensive assessment of KAM readability, addressing potential biases or limitations of relying solely on the FOG Index and ARI, which generally both SMOG Index and Flesch-Kincaid Grade Level provides similar results. The choice of the FOG Index and ARI is well justified given the technical nature of KAMs and the challenges of financial reporting in Palestine. Together, they offer a robust analysis of KAM readability, although additional measures could further enhance the study's findings (El-Haj and Rayson, 2016; Gambetta et al., 2023).

3.3.2. Independent variables

Regarding the independent variables, **Table 3**, presents the variables used in the model. Inspired by Seebeck and Kaya (2023), who examined audit report readability following the implementation of ISA 700, our model incorporates the attributes of both the auditor and client, recognizing that these attributes jointly influence audit reports.

The primary independent variable is AUDITOR, which identifies the audit firms engaged in by the sample companies. These firms include EY, PwC, Deloitte, Talal Abu-Ghazaleh, Maayah and Co., Tarifi Co., Farrage and Nashwan, and BDO, representing a mix of Big Four, regional, and local firms numbered from 1 to 8. The selection of the eight audit firms is not discretionary; these are the sole firms that conducted audits for listed Palestinian companies from 2018 to 2022. The EY is used as the reference point in this study because it accounts for the largest proportion of the sample. As one of the Big Four firms, EY has a significant presence and influence in the audit market, providing a robust baseline for comparing the effects of other firms on KAM readability.

Variable Name	Definition
FOG KAM MATTER	FOG index related to KAM matter description
FOG KAM PROCEDURES	FOG index related to KAM procedure description
ARI KAM MATTER	ARI index related to KAM matter description
ARI KAM PROCEDURES	ARI index related to KAM procedure description
AUDIT FIRM	Categorical variable of the audit firm: EY, PwC, Deloitte, Talal Abu-Ghazaleh, Maayah & Co., Tarifi Co., Farrage & Nashwan, BDO (These are the sole audit firms that conducted audits for listed Palestinian companies at the study period).
KAM TYPE	Dummy variable = 1 if the KAM concerns entity-level risk and = 0 if it concerns accounting-level risk
SWITCH	Dummy variable = 1 if the company has changed its auditor since the previous year and = 0 otherwise
SPECIALIST	Dummy variable = 1 when the auditor is a specialist in the client's industry and = 0 otherwise
SIZE	Natural log of client's total assets
LEVERAGE	Total debt divided by total assets
ROA	Return on assets: total profits divided by total assets
YEARS	Categorical variable that reflects the year of 2018–2022
INDUSTRY	Categorical variable that reflects industry sector: Service, Insurance, Banks, Industry, Investment.

Tab	le 3.	Definition	of study	variables.
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Each audit firm uses its own methodologies and processes that affect auditors' judgments and readability of the KAM matter and procedure descriptions (Zeng et al., 2021). These firms vary in their approaches to assessing litigation risk, commitment to high-quality audits, audit styles, and interpretations of GAAP (related to KAM matters) and GAAS (related to KAM procedures) (Minutti-Meza, 2021; Lennox et al., 2023).

In line with DeFond and Lennox (2011) and Sierra-García et al. (2019), content analysis was conducted on audit reports to categorize KAMs into two groups: entity-level and accounting-level risks (details of KAM topics under each category are shown in **Table 4**. KAM TYPE is a binary variable assigned a value of one for entity-level risks and zero for accounting-level risks. This classification is expected to influence the readability of the descriptions of audit procedures, because different KAM types require varying complexities and scopes of auditor procedures (DeFond and Lennox, 2011; Gambetta et al., 2023).

ACCOUNTING-LEVEL RISK KAM	ENTITY-LEVEL RISK KAM
Asset impairment	Business combination
Accounts/Loans receivables	Compliance with laws and Regulations
Contingent liabilities	Industry-specific issues
Derivatives and hedging	Information technology control
Financial assets	Internal control
Intangibles and goodwill Inventories	Litigation/Regulatory provisions
Investment valuation Leases	Tax-related issues
Long-lived assets Pension schemes	
Presentation and disclosure Property, plant and equipment Revenue	
Supplier rebates	

Table 4. KAM topics by KAM type.

3.3.3. Control variables

Alongside the main variables, we incorporate auditor attributes into our analysis, consistent with the findings of previous studies. For instance, we include a dummy variable 'SWITCH,' which is set to one if there has been a change in the audit firm since the previous year and zero otherwise (Brown and Knechel, 2016). The relationship between change in the auditor and KAM readability is not immediately apparent; however, we propose that a change in the auditor might lead to clearer KAM matter descriptions and procedures. Another consideration is the audit firm's industry specialization, denoted by 'SPECIALIST.' This takes a value of one when the audit firm is recognized as an industry leader. Our initial assumption is that industry specialists are likely to provide more readable KAM descriptions in their audit reports given their extensive knowledge of the client's sector.

Client characteristics are also factored into the analysis as they can influence the complexity of KAM. We measure company size ('SIZE') using the natural logarithm of total assets (Prawitt et al., 2011), hypothesizing that larger companies will have more complex KAMs, leading to less readable audit reports. 'LEVERAGE,' calculated as the ratio of total debt to total assets (Wu et al., 2016), is included to reflect financial stability, with the expectation that companies with higher leverage might present more complex KAMs, reducing readability. Additionally, we consider the company's profitability, represented by 'ROA' (Return on Assets), defined as profit before taxes divided by total assets (Barghathi et al., 2018). The presumption is that more profitable companies will have more readable KAMs due to less complex risks. Finally, the analysis accounts for variations across industries and years to capture the broader range of factors that influence KAM readability.

4. Data analysis and discussion and findings

4.1. Descriptive statistics

As for the descriptive statistics, **Table 5** displays the descriptive statistics for continuous variables based on a dataset of 320 observations. The average FOG index scores for KAM MATTER and KAM PROCEDURES were 11.521 and 11.942,

respectively. These scores are lower than those found in previous studies on disclosure readability in accounting and auditing (Ajina et al., 2016; Wang et al., 2024). In contrast, Zeng et al. (2021) reported much higher mean values in China—25.77 for KAM MATTER and 17.02 for KAM PROCEDURES. This suggests that in Palestine, KAM MATTER readability is notably higher than that in the UK and China, indicating variations in the readability levels of KAM matters and audit procedures across different countries. The mean ARI index scores for KAM MATTER and KAM PROCEDURES were 18.95 and 19.88, respectively, which were higher than those reported by Cano-Rodríguez and Moreno (2020). These findings imply that the descriptions of matters and explanations of audit procedures in the analyzed companies are moderately readable.

Table 5. Descriptive statistics:	Continuous v	variables.
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Variable	Mean	Std. Dev	Min	Max
Dependent variables				
FOG KAM MATTER	11.52	6.27	0.4	32
ARI KAM MATTER	18.95	6.97	7.33	43.4
FOG KAM PROCEDURES	11.94	8.84	4.4	39.6
ARI KAM PROCEDURES	19.88	10.41	7.27	51.9
Control variables				
SIZE	18.01	1.847	13.54	22.6
LEVERAGE	0.532	0.582	0.004	8.304
ROA	0.031	0.056	-0.163	0.354

Table 6	. Descriptive	statistics:	Categorical	independ	lent variables.
	1		0	1	

AUDITOR	Frequency	%	Cumulative
EY	137	43	42.81
Talal Abu-Ghazaleh	73	23	65.63
Deloitte	48	15	80.63
PwC	32	10	90.63
Maayah & Co.	24	7.5	98.13
Farrage & Nashwan	4	1.3	99.38
Tarifi Co.	2	0.6	100
BDO	0	0	100
KAM TYPE	Frequency	%	Cumulative
Accounting	304	95	95
Entity	16	5	100

Table 6 outlines the summary statistics for the categorical independent variables: AUDITOR, and KAM-TYPE. As a member of the Big Four, EY holds the largest market share in our sample, accounting for over 43% of the clients. Talal Abu-Ghazaleh, a notable non-Big Four firm, represents 23% of the sample. In the sample, approximately 68% of the companies were audited by a Big Four company. Additionally, the data show that 95% of KAM observations are related to accounting issues, whereas 5% pertain to the entity level. This implies that KAMs have the potential to enhance operational enhancements and modifications, potentially indicating enhanced audit efficacy (Rautiainen et al., 2021). **Table 7** outlines the summary statistics for the categorical control variables.

SWITCH	Frequency	%	Cumulative
No	299	93	93.44
Yes	21	6.6	100
SPECIALIST	Frequency	%	Cumulative
No	30	9.4	9.38
Yes	290	91	100
YEAR	Frequency	%	Cumulative
2018	68	21	21.25
2019	70	22	43.13
2020	64	20	63.13
2021	62	19	82.5
2022	56	18	100
INDUSTRY	Frequency	%	Cumulative
Banks	38	12	11.88
Insurance	73	23	34.69
Service	58	18	52.81
Industry	63	20	72.5
Investment	88	28	100
Total	320	100	100

 Table 7. Descriptive statistics: Categorical control variables.

4.2. Univariate analysis

The objective of the univariate analysis was to identify any notable differences between the dependent variables, FOG KAM MATTER and FOG KAM PROCEDURES, in relation to the various independent variables. As indicated in **Table 8**, the ANOVA test revealed significant differences in the polytomous variables for the AUDITOR. Specifically, the average mean FOG scores for KAM MATTER and KAM PROCEDURES from EY, Deloitte, and PwC were lower than those from Talal Abu-Ghazaleh, suggesting that KAM descriptions and procedures from EY, Deloitte, and PwC were more readable than those from Talal Abu-Ghazaleh.

FOG KAM MATTER	FOG KAM MATTER						FOG KAM PROCEDURES			
AUDITOR	Mean	Std. dev.	Freq	F	Sig.	AUDITOR	Mean	Std. dev.	F	Sig.
EY	10.26	2.38	137	,		EY	8.39	1.68	,	
PwC	11.23	2.4	32			PwC	6.8	0.9		
Deloitte	10.35	3.04	48			Deloitte	8.86	3.1		
Talal Abu-Ghazaleh	17.84	8.39	73	P EY PwC Deloit 47 0 47 0 Maaya Farrag Tarifi BDO q F Sig. INDU Banks Insura 53 0 Servic Indust Invest	Talal Abu-Ghazaleh	23.07	12.28	54	0	
Maayah & CO	1.43	1.17	24		Maayah & CO	10.21	3.75	34	0	
Farrage & Nashwan	19.15	6.21	4		Farrage & Nashwan	22.55	7.86			
Tarifi Co.	5.8	0.28	2		Tarifi Co.	5.1	-			
BDO	-	-	0			BDO	-	-		
INDUSTRY	Mean	Std. dev.	Freq	F	Sig.	INDUSTRY	Mean	Std. dev.	F	Sig.
Banks	10.75	3.14	38			Banks	7.46	1.1		
Insurance	18.61	7.52	73			Insurance	22.84	12.85		
Service	9.9	4.2	58	53	0	Service	8.01	1.83	66	0
Industry	7.57	4.03	63			Industry	9.21	2.93		
Investment	9.87	3.45	88			Investment	9.39	3.18		
YEAR	Mean	Std. dev.	Freq	F	Sig.	YEAR	Mean	Std. dev.	F	Sig.
2018	10.88	5.4	68			2018	11.61	7.63		
2019	9.87	5.39	70			2019	10.03	7.14		
2020	11.74	6.01	64	2.8	0.03	2020	12.45	9.37	1.5	0.2
2021	12.24	6.69	62			2021	12.39	9.61		
2022	13.31	7.58	56			2022	13.67	10.34		

Table 8. Anova for fog kam matter and fog kam procedures as a function of the independent variables auditor, industry and year.

Additionally, notable differences at the 1% level were observed in the average values of the dependent variables when examining the independent variable, INDUSTRY. The insurance industry exhibited lower levels of readability, with mean FOG scores of 18.61 for KAM MATTER and 22.84 for KAM PROCEDURES. Regarding YEAR, significant results were found only for the dependent variable, FOG KAM MATTER. In 2019, the average score was 9.87, indicating a higher readability of the KAM procedure descriptions compared with the other years included in the study.

In addition, **Table 9** shows the results of the *t*-test for the independent variable KAM-TYPE. The mean differences for both the dependent variables are significant, indicating that descriptions at the entity level are more readable than those at the accounting level.

FOG KAM MATTER						FOG KAM PROCEDURES				
KAM TYPE	Mean	Std. dev.	Freq.	t	Sig.	KAM TYPE	Mean	Std. dev.	t	Sig.
Accounting	11.65	6.37	304	2.97	0.0035	Accounting	12.1	9.02	4.24	0.0001
Entity	9.08	3.14	16			Entity	8.85	2.28		

Table 9. T-student results for fog kam matter and fog kam procedures for the independent variable kam type.

Furthermore, **Tables 8** and **9** reveal that the average scores for the FOG KAM MATTER and FOG KAM PROCEDURES variables show significant variation across audit firms, KAM types, industries, and years. The findings of the univariate test provide initial insights into the research questions of this study. They indicate that the audit firm influences the clarity of both the KAM and KAM procedure descriptions that address research question two, whereas the type of KAM affects the readability of the KAM procedure description that addresses research question one.

Furthermore, a detailed post-hoc analysis was conducted to compare the adjusted mean values of AUDITOR, INDUSTRY, and YEAR in relation to FOG KAM MATTER and FOG KAM PROCEDURES. Notably, there were significant differences in readability among the descriptions provided by EY, PwC, Deloitte, Talal Abu-Ghazaleh, Farrage, and Nashwan, with the latter showing lower readability levels in their KAM matters and procedural descriptions.

The industry-wise analysis showed notable differences in readability for both FOG KAM MATTER and FOG KAM PROCEDURES. The insurance sector has markedly lower readability than other industries. By contrast, the most readable KAM reports were found in the banking, services, industry, and investment sectors. Additionally, the industrial sector stood out for having significantly higher readability levels in KAM matter descriptions than other sectors. This suggests that the industry type has a considerable impact on the readability of both KAM matters and the procedures used to determine them. Significant differences were also observed in the readability of KAM matter descriptions across different years, with 2019 showing higher readability than 2022. This indicates a decline in readability towards the end of the study period, but this trend was observed only in the descriptions of KAM matters and not in KAM MATTER and ARI KAM PROCEDURES, and the results were consistent with those for FOG KAM MATTER and FOG KAM PROCEDURES.

4.3. Empirical models

The Empirical Models presented in **Table 10** display the outcomes of the regression analysis, which was performed using Stata software, focusing on how the audit firm affects the readability of the KAM descriptions. In Model 1a, which examines the FOG KAM MATTER, the findings for the independent variable AUDITOR reveal a pronounced positive relationship with Farrage and Nashwan (8.310; *p*-value = 0.000) and Talal Abu-Ghazaleh (7.674; *p*-value = 0.000), indicating that KAM matter descriptions from these firms are less readable. Conversely, Maayah & Co. (-7.184; *p*-value = 0.000) showed a negative association, whereas the coefficients for PwC, Deloitte, and Tarifi Co. were not statistically significant. Given

that EY was used as a reference, these outcomes suggest that the KAM descriptions from EY, PwC, Deloitte, and Tarifi Co. are relatively more readable.

For Model 1b, which looks at ARI KAM MATTER, Farrage and Nashwan (8.308; p-value = 0.000) and Talal Abu-Ghazaleh (7.924; p-value = 0.000) again showed significant positive associations. No significant associations were observed for PwC, Deloitte, or Tarifi Co. Aligning with Model 1a, this indicates that EY, PwC, Deloitte, and Tarifi Co. tend to provide more readable KAM matter descriptions. These results address RQ2, which theorizes that the readability of KAM descriptions varies among auditing firms.

	Model 1: Impact of audit firm on KAM matter readability		Model 2: Impact of audit firm and KAM type on KAM procedures readability	
	1a. FOG	1b. ARI	2a. FOG	2b. ARI
	Coef.	Coef.	Coef.	Coef.
	[<i>p</i> -value]	[<i>p</i> -value]	[p-value]	[<i>p</i> -value]
INDEPENDENT VA	RIABLES			
Auditor (EY)				
PwC	0.211 [0.8060]	-0.992 [0.3620]	-2.585 [0.0310]	-1.896 [0.1910]
Deloitte	0.833 [0.2490]	0.658 [0.4740]	1.55 [0.1250]	1.909 [0.1190]
Talal Abu-Ghazaleh	7.674 [0.0000]	7.924 [0.0000]	14.454 [0.0000]	16.474 [0.0000]
Maayah & Co.	-7.184 [0.0000]	-1.203 [0.3290]	3.533 [0.0090]	3.521 [0.0320]
Tarifi Co.	-3.222 [0.2880]	-5.457[0.1570]	-2.008 [0.6330]	-3.813 [0.4550]
Farrage & Nashwan	8.31 [0.0000]	8.308 [0.0030]	12.441 [0.0000]	14.056 [0.0000]
KAM type	-	-	0.876 [0.5730]	1.097 [0.5600]
CONTROL VARIABI	LES			
Switch	0.542 [0.5850]	0.316 [0.8020]	3.235 [0.0190]	3.902 [0.0200]
Specialist	- Omitted	- Omitted	- Omitted	- Omitted
Size	0.567 [0.0000]	0.808 [0.0000]	0.484 [0.0230]	0.67 [0.0090]
Leverage	1.201 [0.0010]	1.49 [0.0010]	1.477 [0.0030]	1.969 [0.0010]
ROA	-1.552 [0.7620]	-4.407 [0.5000]	-9.382 [0.1900]	-15.885[0.0680]
Year-controlled	Yes	Yes	Yes	Yes
ndustry-controlled	Yes	Yes	Yes	Yes
Constant term	1.426	4.953	2.428	6.957
Adjusted R ²	0.5557	0.4174	0.5688	0.5423

Table 10. The impact of audit firm on readability of KAM matter and procedures.

Regarding the control variables in Model 1a, the coefficient of LEVERAGE is positive and significant, implying that companies with higher leverage tend to have more complex descriptions of KAM. Additionally, the coefficient of SIZE is positive and significant, suggesting that KAM matter descriptions from larger companies are more challenging to read, possibly because of the use of more intricate explanations for KAM. However, ROA and Specialist variables did not show significant associations.

Furthermore, Model 1b shows the same results as Model 1a. In Model 2a, which assessed FOG KAM PROCEDURES, the independent variables AUDITOR indicated that Talal Abu-Ghazaleh (14.454; p = 0.000) and Farrage and Nashwan (12.441; p = 0.000) had the most significant positive relationships. This suggests that these firms offer the most complex explanation of the audit procedures conducted for KAM. Although Maayah et al. (3.533; p = 0.009) also showed a positive and significant relationship, the effect was less pronounced than that reported by Talal Abu-Ghazaleh et al. The association between Deloitte and Tarifi Co. is not significant. Therefore, in comparison, EY (along with Deloitte and Tarifi Co.), the reference firm in the model, provides the clearest description of the KAM procedures.

The findings in **Table 10**, particularly the insignificant results for Big Four audit firms, suggest that factors beyond simply being part of the Big Four influence the readability of Key Audit Matter (KAM) disclosures. Specifically, the observation that firms such as Talal Abu-Ghazaleh, Farrage, and Nashwan provide more complex explanations of audit procedures could be attributed to their distinct attributes such as localized expertise, specific methodologies, or organizational culture. These firms may prioritize detailed explanations as part of their competitive strategy to differentiate themselves from larger audit firms.

The other key independent variable, KAM TYPE (0.876; p-value = 0.573), is positively but not significantly correlated, indicating no discernible effect on readability between audit procedures addressing entity-level risks and those addressing accounting-level risk KAMs. In Model 2b, focusing on ARI KAM PROCEDURES, the findings align with Model 2a, showing that descriptions by EY, Deloitte, and Tarifi Co. are more readable and that there is no notable difference in readability for KAM procedures between entity-level and accounting-level risks. These results are relevant to RQ1 and RQ3. Looking at the control variables in Model 2a, the correlation between the readability of the KAM procedures and the SWITCH variable was positive and significant. This indicates that when a new auditor describes procedures for addressing KAM, readability is generally lower than that provided by an established firm. However, larger companies (as indicated by the SIZE variable) tend to offer less readable descriptions of the KAM procedures. Additionally, the KAM procedures conducted by highly leveraged companies (LEVERAGE) are typically less readable. In Model 2b, the findings for SWITCH and SIZE mirror those for Model 2a.

5. Conclusion, limitations and further research recommendations

5.1. Conclusion

This study investigates the impact of audit firms and key audit matters (KAMs) on audit report effectiveness in Palestine using descriptive statistics, correlations, and multivariate analysis to highlight critical aspects of financial reporting quality. The findings indicate that the choice of audit firm significantly affects KAM readability and quality, with non-Big Four firms adopting different approaches than larger firms. The study reveals how audit firms' communication strategies for KAMs influence financial reporting quality and litigation risk, emphasizing the need for tailored and transparent reporting (Maroun and Duboisée de Ricquebourg, 2023).

The practical implications are significant for various stakeholders. Audit firms should adopt standardized methodologies and tailored communication strategies for KAM disclosure. In particular, non-Big Four firms should simplify complex information to enhance readability, thus improving stakeholders' understanding and confidence in their financial statements (Frost, 2024). Training programs are essential for auditors to enhance their skills in writing clear KAM disclosures. Listed companies should consider audit firms' ability to communicate KAMs effectively when selecting auditors, thus impacting financial report transparency and quality. Collaboration between companies and auditors is crucial for ensuring accurate and understandable KAM disclosures (Chang et al., 2024).

Regarding policymakers, authorities should establish clear guidelines for KAM disclosures to ensure consistency and comprehensibility, continuously monitor and evaluate audit reports, and provide feedback to drive improvements in financial reporting quality (Wang and Wu, 2024). Policymakers should develop frameworks balancing thoroughness with readability, addressing litigation risk, and enhancing cross-country comparability and quality of financial reports by adopting international auditing standards adapted to local contexts (Al-Absy et al., 2024; Muhabbat and Jakhongir, 2024). This approach ensures that financial reporting in Palestine meets global standards while also addressing local nuances (Lin, 2023).

5.2. Contributions to literature

This study contributes significantly to the literature on financial reporting and auditing. This reveals differences in audit practices between Big Four and non-Big Four firms, highlighting that non-Big Four firms produce less readable Key Audit Matter (KAM) disclosures (Sirois et al., 2018). It analyzes the impact of audit firm characteristics on KAM readability and quality in Palestine, expanding the research beyond developed countries (Barakat, 2016). Using the FOG and ARI indices, this study quantitatively assesses KAM complexity and offers new insights into audit communication. This research underscores the importance of audit firm selection for enhancing financial report transparency and comprehensibility in Palestine, providing valuable recommendations for policymakers and stakeholders.

5.3. Research limitations

Our study spans the years 2018 to 2022, aligned with the period of expanded

audit report implementation in the UK (2013–2016). While this timeline offers insights into the early stages of the new reporting landscape, it may not fully capture the recent developments. Our focus is primarily on listed companies in Palestine, which raises questions about the generalizability of our conclusions to unlisted entities. Recognizing the potential variations in reporting dynamics between these two categories. The regulatory landscape varies across countries, with Palestine being no exception. The uniqueness of the regulatory context in Palestine may influence audit firms' behavior regarding KAM disclosures. By transparently recognizing and addressing these constraints, researchers can refine methodologies and expand the scope of inquiry, ultimately advancing our understanding of the complex interactions within the realm of audit and financial reporting.

5.4. Further research recommendations

This study highlights the impact of audit firms and key audit matters (KAMs) on audit report effectiveness in Palestine, suggesting that future research should adopt a longitudinal approach to assess KAM readability evolution and explore audit firm attributes. Advanced methodologies such as cross-sectional analysis and endogeneity testing are recommended to address biases. User-centric perspectives, including surveys and interviews, can reveal the practical implications of KAM complexity in decision making. Cross-country comparative analyses can explore the influence of the regulatory context on audit firm behavior. Engaging stakeholders through focus groups or interviews can provide qualitative insights, enhancing the understanding of KAM disclosure motivations and challenges (Alslaibi and Abdalkarim, 2024; Darwish, 2022; Ojra, 2014).

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