check for updates

Financial statement, geographic proximity, and readability footnotes: The moderating effect of the audit fee

Iman Harymawan[1+]

Suham Cahyono[2]

Mohammad Nasih[3]

Khairul Anuar Kamaruddin[4]

[1,2,3]*Department Accountancy, Faculty Economic and Business, Universitas Airlangga, Indonesia.*
[1]*Email: harymawan.iman@feb.unair.ac.id*
[2]*Email: suham.cahyono-2018@feb.unair.ac.id*
[3]*Email: mnasih@feb.unair.ac.id*
[4]*Department of Accountancy, Faculty of Business, Finance, and Management, University of Wollongong, Dubai, UAE.*
[4]*Email: KhairulKamarudin@uowdubai.ac.ae*

(+ Corresponding author)

ABSTRACT

The paper aims to investigate the relationship between geographic proximity and the readability of financial statement footnotes, which are important sources of information for stakeholders before making decisions about the firm. Our study focuses on examining the impact of distance and audit fees on the dynamics of auditor-client relationships when it comes to generating or evaluating complex financial statement footnotes. The sample for this study consists of 1,117 firm-year observations from firms listed on the Indonesia Stock Exchange (IDX) from 2018-2020. We employ fixed-effect regression and selection bias testing to ensure the robustness of the results. The authors find that geographic proximity between auditors and clients has an impact on the readability of financial statement footnotes, particularly when the distance between the client and auditor is closer, which may make it more challenging to read financial statement footnotes. Additionally, the interaction between audit fees and geographic proximity can make it easier to read financial statement footnotes. Our findings suggest that closer geographic proximity does not provide information advantages regarding hard-to-read financial statement footnotes, and these results are robust to several endogeneity and robustness tests. Our paper contributes to filling the gap between the auditor-client relationship in hard-to-read financial statement footnotes, which are measured by geographic proximity and audit fees, and how auditors and clients can work best in auditing.

Contribution/Originality: This paper makes significant contributions both theoretically and practically. Theoretically, this paper fills a gap in the literature by examining the impact of geographic proximity on the readability of financial statements. In addition, the study gives more consideration to the audit fee and the proximity between the client and partner in determining firm outcomes, which has practical implications.

1. INTRODUCTION

Clients and stakeholders frequently use financial statements as a source of information (Lo, Ramos, & Rogo, 2017). Unlike annual reports, a financial statement is needed to determine investment decisions (Li, Chen, Qi, & Tian, 2020), looking at risk (Miller, 2010), and management control (Muslu, Radhakrishnan, Subramanyam, & Lim, 2015), as well as sustainable business opportunities (Lim, Chalmers, & Hanlon, 2018). While an investor wants to invest, they would like to analyze the long-term risks and opportunities of the company's business to gain future

advantages. The most important and focused section for investors is the financial statement footnote (Lim et al., 2018). Financial statement footnotes are supplementary information that elucidates the company's financial and business condition, which has been presented exhaustively in financial statement footnotes (Xu, Fernando, Tam, & Zhang, 2020). Financial statement footnotes provide additional information to the financial statements that can help users understand the company's financial and business condition in more detail (Ismail, Kamarudin, Van Zijl, & Dunstan, 2013; Salehi, Lari Dasht Bayaz, Mohammadi, Adibian, & Fahimifard, 2020; Wan Ismail, Kamarudin, & Sarman, 2015). This information can include details about accounting policies, contingencies, legal proceedings, and other important financial and non-financial information that may not be evident from the primary financial statements alone (Seifzadeh, Salehi, Abedini, & Ranjbar, 2021; Yoga Pratama, Putu Dian Rosalina Handayani Narsa, & Pranetha Prananjaya, 2022). In addition, financial statement footnotes can also provide context and clarification for the numbers presented in the primary financial statements. This can help users make more informed decisions about the company's financial health and performance. Overall, financial statement footnotes play a crucial role in providing transparency and disclosure in financial reporting (Moghadam, Salehi, & Hajiha, 2021). They help ensure that users have access to comprehensive and accurate information about a company's financial position, performance, and risks.

Some of the information that becomes a reference for investors is information on accounting policies (Abernathy, Guo, Kubick, & Masli, 2019), company business (Tetlock, Saar-Tsechansky, & Macskassy, 2008), accounting policies and standards best practices (Beattie, Fearnley, & Hines, 2015), as well as fiscal and monetary policy information (Biddle, Hilary, & Verdi, 2009). The information is helpful for potential and future investors to have the opportunity to invest and generate value for the company (Abernathy et al., 2019; Beattie et al., 2015; Xu, Pham, & Dao, 2020). Presentation and assessment given by the auditor are key factors that affect the clarity of the information displayed in the financial statement footnotes (Lim et al., 2018). In addition, some aspects of company fundamentals that cannot be measured but can affect stock prices are better captured in relevant qualitative information (Tetlock et al., 2008). Auditors play an important role in ensuring that the information presented in the financial statements is accurate, complete, and compliant with accounting standards. However, the clarity of information in financial statement footnotes is not only affected by the presentation and assessment provided by the auditor but also by the quality and relevance of the information itself. As noted by Tetlock et al. (2008), some aspects of company fundamentals that cannot be measured, such as management quality or corporate culture, may be better captured in relevant qualitative information. In other words, while financial statement footnotes can provide important quantitative information, they may not fully capture all of the qualitative factors that can affect a company's financial performance and stock prices (Tetlock et al., 2008). Therefore, it is important for auditors and companies to also consider and provide relevant qualitative information in financial reporting in order to provide a more comprehensive view of the company's financial and business condition to stakeholders.

In addition, the potential audit fees to clients for the proximity and distance of the two have the potential to produce synergies of power that pass through the footnotes of financial statements to become easier to read (Wang, Chen, Li, & Tian, 2021). Unfortunately, much of the evidence that has been done previously has nothing to do with the geographical proximity and legibility of financial footnotes (Blanco, Coram, Dhole, & Kent, 2021; Cho, Hyeon, Jung, & Lee, 2022; Wang et al., 2021), and almost no studies have proven successful in the influence of those (Xu et al., 2020). Previous studies have focused heavily on the relationship of audit and client proximity to the readability of annual reports but failed to find how the footnotes of financial statements also have the potential to have a strong influence on the consequences of the proximity of auditors and clients (Behn, Choi, & Kang, 2008; Chin & Chi, 2009). Audit fees are also taken into consideration to determine whether the footnotes of the report become less hard-to-read. Auditors can see the complex strategy language used in financial statements and related actions. Audit fees can indeed be a factor that affects the clarity of financial statement footnotes. As noted in previous research (e.g., Lim et al. (2018)), auditors can play a key role in ensuring that financial statement footnotes are clear

and easily understandable to stakeholders. Nevertheless, auditors may encounter difficulties when attempting to interpret intricate financial terminology and associated practices employed by corporations. Higher audit fees may provide incentives for auditors to devote more time and resources to thoroughly reviewing and understanding the financial statement footnotes and to communicate any findings or concerns to the company's management. This can help ensure that the footnotes are clear, accurate, and compliant with relevant accounting standards and regulations. In addition, the audit fee can also reflect the complexity and risk involved in auditing the financial statements of a particular company. Higher audit fees may be charged for companies with more complex financial statements or higher risk factors, which may require additional time and resources from the auditor to properly review and assess.

This study aims to investigate whether the geographical proximity of the auditor to his client has an impact on the hard-to-read financial statement footnotes. In addition, we also investigate whether the interaction effect of audit fees can motivate auditors to provide more productive and readable information (Becker, DeFond, Jiambalvo, & Subramanyam, 1998; Behn et al., 2008; Chin & Chi, 2009; DeAngelo, 1981; Geiger & Rama, 2006). It is possible that audit quality will have a significant effect on financial statement footnotes when they are not closed from their clients. Geographic proximity will stimulate auditors to be more independent, and the resulting audit quality will increase the readability of financial statement footnotes. In addition, large auditors are motivated to maintain their independence without sacrificing their professionalism to one high-risk client in exchange for higher fees, taking into account their reputation and opportunity costs (DeAngelo, 1981; Seifzadeh et al., 2021). The importance of auditor independence has increased significantly in its role of ensuring the accuracy and reliability of financial statements provided by clients for information users. The influence of high risk customers on auditor independence is a significant concern, necessitating auditors to uphold independence and objectivity when doing audits (Behn et al., 2008; Chin & Chi, 2009; Tetlock et al., 2008). In this context, audit fees can also affect auditor independence and the quality of the audit performed. If the audit fees are too low, auditors may be tempted to sacrifice audit quality to meet cost targets and maintain relationships with clients (Ismail et al., 2013; Lim et al., 2018). On the other hand, audit fees that are too high can be a factor that hinders clients from using audit services. Therefore, it is important for auditors to determine a reasonable audit price and consider the balance between the cost and quality of the audit performed.

Meanwhile, hiring specialist auditors has proven to be a better risk management effort. When faced with high-risk clients, auditors with extensive experience in the relevant industry are more likely to detect errors and hidden information and thus reduce the risk of misstatement—that is, they are better able to absorb some of the risks and mitigate the impact (Moghadam et al., 2021). This is because specialist auditors have deeper knowledge and experience in the relevant industry and have the ability to identify risks that may be associated with certain clients. Additionally, specialist auditors are also better able to recognize accounting policies that are not compliant or standard in that industry and provide appropriate advice to clients to improve them (de Souza, Rissatti, Rover, & Borba, 2019). In the context of high-risk clients, the use of specialist auditors can help reduce the risk of errors and hidden information. It can also help clients gain trust from other stakeholders, such as investors, analysts, and regulators. However, it is important to remember that hiring specialist auditors is not a guarantee that all risks can be identified and addressed (Behn et al., 2008; Xu et al., 2020). Therefore, companies must still be cautious when choosing the right specialist auditor and ensuring that the quality of the audit is well maintained. Thus, the legibility of financial statement footnotes is considered a mitigation effort by auditors to complete their audit assignments in accordance with the audit fees received (Safari Gerayli, Rezaei Pitenoei, & Abdollahi, 2021). Therefore, auditors take into account the audit fees received in line with the audit risks faced to produce relevant information and ensure the legibility of financial statement footnotes.

This study also provides evidence that geographic proximity between the auditor and client is a channel that makes the readability of financial statement footnotes more readable. By establishing the relationship between

geographic proximity, audit fees, and Management Discussion and Analysis (MD&A) readability, we confirm that audit fees are the channel through which the geographic proximity of auditors and clients affects the legibility of financial statement footnotes. Second, Xu et al. (2020) confirmed that auditors charge higher audit fees when faced with difficult-to-read annual reports; they consider the risk of information being materially misstated. In addition, Fang, Lobo, Zhang, and Zhao (2018) produce empirical evidence that geographical proximity does not quite play a significant role as a factor that makes financial statement footnotes easier to read. Therefore, on another occasion, Dong, Robinson, and Emily (2017) proved that audit fees can increase the readability potential of annual reports, making them easier to read. Our study is the first in accounting and finance research to investigate the interaction effect of audit fees and auditor-client geographic proximity. We find that the higher the audit fees paid by the client, the more legible the footnotes of the financial statements are; Geographic proximity refers to the physical distance between a company and its auditor. The closer the two are geographically, the easier it is for the auditor to conduct the audit, which can result in lower audit fees. This is because auditors can save time and money on travel expenses and other costs associated with conducting audits in distant locations. Readability of financial statement footnotes refers to how easily the information in the footnotes can be understood by users (Safari Gerayli et al., 2021). Footnotes that are clear and easy to understand can reduce the time and effort required by auditors to review and understand the information. This can result in lower audit fees because the auditors can complete the audit more efficiently. The effect of geographic proximity on audit fees may be moderated by the readability of financial statement footnotes (Beck, Gunn, & Hallman, 2019; Malhotra & Morris, 2009). If the footnotes are difficult to understand, auditors may need to spend more time reviewing them, even if they are geographically close to the company. This could negate any potential cost savings from geographic proximity. Similarly, the effect of the readability of financial statement footnotes on audit fees may be moderated by geographic proximity. If the auditor is located far away from the company, they may need to spend more time reviewing the footnotes, even if they are easy to understand. This could result in higher audit fees, despite the footnotes being readable.

The rest of this paper is presented as follows: The second section discusses the literature review and hypothesis development. The third part is the data and research methods used in this study. The fourth section is an empirical result and discussion. Finally, section five is conclusions, suggestions, and limitations.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Readability of Financial Statement Footnotes: The Study from Geographic Proximity Client-Auditor and Audit Fee

The audit firm will provide audit services to support the needs of its clients through the practice office closest to its clients. Clients often perceive the geographical proximity of the audit service practice office as a factor that fosters a unique and close relationship between the client and the auditor. This relationship is characterized by familiarity and mutual understanding of each other's requirements. It is worth noting that the local audit engagement office plays a crucial role in facilitating the client's engagement of the auditor for a range of the significant information that ultimately contributes to the preparation. This relationship can also provide benefits such as a better understanding of the client's business environment, culture, and industry, which can lead to a more effective and efficient audit process. Additionally, the proximity of the audit service practice office can facilitate timely communication and responsiveness to the client's needs and concerns. However, it is important to note that the selection of the audit firm and engagement office should not be based solely on geographic proximity but also on the firm's reputation, experience, and expertise in the relevant industry. The audit firm should also ensure that its audit services comply with applicable auditing standards and regulations to maintain the integrity and reliability of the financial statements.

Auditor-client geographical proximity is defined as an auditor's office that has many partners outside the main office who have the potential to manage audit engagements better. Geographic proximity ultimately indicates the physical distance between players and home base (Howells, 2002). While short distance supports interaction,

networking, collaboration, and innovation, long distance requires more complementary proximity to achieve closeness (Boschma, 2005). Recent work on innovation ecosystems (Ben Letaifa & Rabeau, 2013; Desrochers, 2001; Theodoraki, Messeghem, & Rice, 2018) highlights the role of interdependence rather than geographic proximity in explaining collaboration and innovation. In other words, while physical proximity can facilitate collaboration and innovation in the short term, long-term success often depends more on shared goals, values, and complementary skills and resources than on physical distance. This is why many successful innovation ecosystems today span multiple geographic regions and even countries, relying on digital technologies and other forms of communication and collaboration to bridge the gaps between physical distances. Ultimately, the key to successful collaboration and innovation lies not in physical proximity alone but in finding ways to create meaningful connections and relationships regardless of where individuals and organizations are located.

However, geographic proximity still plays a positive role, and location still matters. The literature is beginning to recognize the need to identify the conditions under which clusters collaborate. For example, too little proximity will harm the ability of auditors and clients to produce legible financial statements, and too much proximity will facilitate reading difficulties but, at the same time, will reduce the potential for non-symmetric information gaps between auditors and clients (Ben Letaifa & Rabeau, 2013; Boschma, 2005; Desrochers, 2001; Theodoraki et al., 2018). The concept of proximity in auditing refers to the level of closeness or distance between auditors and clients, both physically and relationally. Finding the right balance of proximity is essential in producing accurate financial statements, as it affects the quality of communication and information sharing between the two parties (Beck, Gunn, & Hallman, 2019; Carcello, Hermanson, & McGrath, 1992; Dong et al., 2017). When there is too little proximity, such as when auditors and clients are physically far apart or have a distant relationship, it can hinder the flow of information and communication, leading to errors in financial statements. On the other hand, too much proximity, such as when auditors and clients have a very close relationship, can also create problems. For example, auditors may become too sympathetic to their clients and overlook potential errors or fraud, leading to inaccurate financial statements. Therefore, finding the right balance of proximity is crucial in auditing to ensure that auditors and clients can communicate effectively while still maintaining objectivity and independence. It requires a delicate balancing act where auditors must maintain a professional relationship with their clients while also maintaining an appropriate level of distance to ensure that they can provide an objective assessment of the financial statements.

2.2. Hypothesis Development

Previous studies have documented that geographic proximity is associated with auditors' local knowledge better than non-local knowledge, where geographical proximity further aligns with auditors' ability to be more objective about the information conveyed by management. In addition, geographical proximity leads to a decentralized organization, where auditor companies have more information processing capabilities when the connectivity between auditors and clients is in the local area instead of non-local. Decentralized organizations define larger public accounting firms, with many partners outside the main office playing important roles in contracting and managing audit assignments (Reynolds & Francis, 2000). Due to the advantages of client-specific information and the requirements for face-to-face client connections, this organizational structure has evolved (Malhotra & Morris, 2009). However, the decentralized structure also poses challenges in terms of maintaining consistency and quality control across multiple locations and teams. To address these issues, firms often implement standardized audit methodologies and quality control procedures while also investing in technology to facilitate communication and collaboration among geographically dispersed teams (Knechel, Krishnan, Pevzner, Shefchik, & Velury, 2013). Additionally, training and development programs are crucial for ensuring that all partners and staff members adhere to the firm's standards and best practices (Cohen & Simnett, 2015). The ultimate achievement of decentralized accounting firm hinges upon its capacity to effectively reconcile the advantages derived from localized expertise and the client relationships with the imperative with the centralized control and quality assurance.

A geographically dispersed structure is desirable because it minimizes and harmonizes transportation costs and information asymmetry that impacts audit quality by enabling audit firms to better understand their on-premises clients, and, as a result, customers have higher confidence in professional competence—locally based (Beck et al., 2019; Carcello, Hermanson, & McGrath, 1992; Dong et al., 2017). This structure also aids auditor-related specifications by delegating decision-making authority to the business professional with the most in-depth understanding of customers and local market conditions, increasing the likelihood that all relevant information will be analyzed. In addition, this approach helps to streamline the auditing process by reducing the need for auditors to request information from multiple individuals and departments, as the business professional responsible for the decision-making can provide all necessary documentation and explanations directly to the auditor. This not only saves time and resources but also helps to ensure that the auditing process is more accurate and comprehensive. Overall, delegating decision-making authority to those with the most relevant knowledge and expertise can enhance the effectiveness and efficiency of both business operations and auditing procedures.

Meanwhile, the geographical proximity perspective explains that information asymmetry and opportunistic behavior are possible when the auditor deals with clients. Clients who are close geographically to the auditor can provide opportunities for opportunistic behavior by clients and auditors to take actions detrimental to the company, for example, manipulating several economic events in the financial statements (Qian & Ge, 2021). In addition, this closer relationship is possible as a source of cooperation tools to smooth and obscure important information that should be reported in financial statement information. Therefore, geographically closer auditor-client bonding is an essential mechanism for exchanging information and evaluating the characteristics and incentives of their clients for the better (Xu et al., 2020). Despite this evidence, acquiring client-specific knowledge, such as internal control structures and substandard reporting, is critical for the auditor to plan practical audit activities, identify relevant risks, and correctly interpret audit evidence. However, opportunities for opportunistic actions to obscure information are also made possible by the close interactive relationship between the auditor and the client. Thus, the proposed hypothesis is as follows:

H1: Ceteris paribus, there is a relationship between proximity geographically auditor-client to produce financial statement footnotes so difficult to readable.

Previous research has shown that market participants tend to value timely financial updates highly. Consequently, to the extent that the audit process is a barrier due to the timeliness of audited financial statements, organizations may face unintended consequences, such as increased information asymmetry. As a result, market reactions tend to be negative (Alford, Jones, & Zmijewski, 1994; Chambers & Penman, 1984). The COVID-19 outbreak has paralyzed social activities around the world. The Indonesian government responded to the COVID-19 pandemic through Certified Public Accountant (CPA) Indonesia and provided instructions for accessing customer information during the COVID-19 pandemic using a hybrid audit procedure. Government awareness of audit timeliness and quality during the COVID-19 epidemic increases auditor efficiency through technology accessibility, standard audit tools, and the general practice of exchanging information between audit firms (Malhotra & Morris, 2009).

A slight audit fee advantage may occur when the geographical proximity between the auditor and the client is very close (Petersen & Rajan, 2002). However, not all small audit fees benefit from a more effective audit forecasting mechanism. High audit fees, as in most audit engagement cases, have proven that the trend of reported information is more effective and informative. The decisive reason linking the scale of information in financial statements and effective audit estimates, not of the small audit fees, is fundamental and related to the need for audits resulting in hefty audit fees (Xu et al., 2020). On the other hand, the adequacy of evidence obtained based on past studies provides a necessary code for the close geographical relationship between auditors and clients (Ningsih, Prasetyo, Puspitasari, & Cahyono, 2023). There is no valid evidence for the bond between the auditor and his client. However,

it is strongly suspected that audit fees have a high impact on manipulative and opportunistic management behavior. Thus, we proposed the hypothesis as follows:

H2: Ceteris paribus, there is an interacting role of audit fee on relationship between proximity geographically auditor-client to produce financial statement footnotes so easy to read.

3. DATA AND RESEARCH METHODOLOGY

3.1. Data and Sample

Our sample includes all public companies listed on the Indonesian stock exchange for 2018-2020. The selection of the sample period in 2018 was the initial observation because we considered the standardization of the submission of financial statement footnote information, which is part of the company's annual report. The number of observations we obtained is 1,117 firm-years after removing all special-treated firm-year observations and missing data. Although we believe our sample still exists on outliers, all variables are winorized at 1 to 99 percent to overcome the occurrence of outliers. Geographic proximity data was obtained from Google Geographic Proximity Software and the company's annual report, which contained information on the distance between clients and auditors. Table 1 provides criteria sample selection for this study; we significantly exclude non-financial industries and other criteria samples, which is not convincing to the study.

Table 1. Criteria sample selection.

Sample selection process	Total
Total industry-years sample period 2018-2020	1.671
Disqualified:	
Missing data PROXIMITY	(249)
Missing data firm size	(213)
Missing data board size	(55)
Missing data CASHTA	(37)
Final sample	1.117

Table 2 shows the distribution of samples according to industry classification, which displays the highest number of observations in Standard Industry Classification (SIC) 1, 2, and 4 clusters, namely mining and construction as many as 142, construction industries as many as 251, transportation, communication, electricity, gas, and cleaning services as 172 observations. Meanwhile, the smallest observations are SIC 0, 5, and 8, where Agriculture, Forestry, and Fishery are 33, Wholesale and retails traders are 98, and Health, Legal, and Educational Services and Consulting are 28 observations.

Table 2. Sample distribution by industry and power of CEO.

Variables	N	%
(SIC 0) Agriculture, forestry, and fishery	33	2.95
(SIC 1) Mining and construction	142	12.71
(SIC 2) Construction industries	251	22.47
(SIC 3) Manufacturing	152	13.61
(SIC 4) Transportation, communication, electricity, gas and cleaning services	172	15.40
(SIC 5) Wholesale and retails trader	98	8.77
(SIC 6) Financial industry	139	12.44
(SIC 7) Services industries	102	9.13
(SIC 8) Health, legal, and educational services and consulting	28	2.51
Total	1117	100.00

3.2. Empirical Model Specification

We use fixed panel regression periods with standard errors on observations from each company to look at the link between how close an auditor is to a client geographically and how easy it is to read financial statement footnotes using an audit cost interaction model:

Model 1:

$$Readability_{i,t} = \beta_0 + \beta_1 PROXIMITY_{i,t} + \beta_2 LnFEE_{i,t} + \beta_3 FIRMSIZE_{i,t} + \beta_2 ROA_{i,t} + \beta_2 BIG4_{i,t} + \beta_2 LEV_{i,t} + \beta_2 CURRENT_{i,t} + \beta_2 LOSS_{i,t} + \beta_2 PPE_{i,t} + \beta_2 CASHTA_{i,t} + \beta_2 INDCOMSIZE_{i,t} + \varepsilon \quad (1)$$

Model 2:

$$Readability_{i,t} = \beta_0 + \beta_1 PROXIMITY_{i,t} + \beta_2 LnFEE_{i,t} + \beta_3 PROXIMITY * LnFEE_{i,t} + \beta_3 FIRMSIZE_{i,t} + \beta_2 ROA_{i,t} + \beta_2 BIG4_{i,t} + \beta_2 LEV_{i,t} + \beta_2 CURRENT_{i,t} + \beta_2 LOSS_{i,t} + \beta_2 PPE_{i,t} + \beta_2 CASHTA_{i,t} + \beta_2 INDCOMSIZE_{i,t} + \varepsilon \quad (2)$$

3.3. Variable Operationalized

Our test variables capture the readability of the financial statement footnotes corresponding to the measurement (Abernathy et al., 2019), where readability is measured using content calculated from the footnotes of the financial statements, which is part of the explanatory paragraph on the accounting figures listed in the financial statements. Financial statement footnotes can be a source of information that provides additional information about the risks of audit engagement (Abernathy et al., 2019). Specifically, we measured readability using four readability indices (Chan, Park, Huang, & Parhankangas, 2020; Habib & Hasan, 2019; Xu et al., 2020), namely Flesch-Kincaid Grade Level (FKGL), Flesch-Kincaid Readability Index (FKRI), Gunning-Fog Readability Index (GFRI), and Simple Measure of Gobbledygook (SMOG). The measurements of the four indices are as follows:

$$FKGL\ index = 206.835 - 1.015 \left(\frac{total\ words}{total\ sentences}\right) + 8.46 \left(\frac{total\ syllabels}{total\ words}\right) \quad (1)$$

$$FKRI\ index = 0.39 \left(\frac{total\ words}{total\ sentences}\right) + 11.8 \left(\frac{total\ syllabels}{total\ words}\right) - 15.59 \quad (2)$$

$$GFRI\ Index = 0.4 \left\{\left(\frac{words}{sentences}\right) - 100 \left(\frac{complex\ words}{words}\right)\right\} \quad (3)$$

$$SMOG\ Index = 1.043 \sqrt{30x \frac{total\ syllabels}{total\ words}} - 3.1291 \quad (4)$$

The independent variable of this study is auditor-client proximity (PROXIMITY), which is measured by the distance between the auditor's office and in the auditor's annual report (Jensen, Kim, & Yi, 2015), his client stated that measurements based on Google Distance would provide accurate information regarding the position of the auditor's office and the client at a geographical coordinate in latitude and longitude. Control variables are used to provide test results to make them more accurate and of high quality. We use several variables, including the size of the company (FIRMSIZE), return on equity (ROE), auditor size (BIG4), LEV, CURRENT, LOSS, PPE, CASHTA, and also the size of independent commissioners (INDCOM SIZE), as presented in Table 3.

4. EMPIRICAL RESULT AND DISCUSSION

4.1. Descriptive Statistic

Table 4 of panel A presents the univariate test results of the difference in average and median readability, namely FLESCH, KINCAID, SMOG, and FOG, where the average and median of each readability index are FLESCH 4,052 and 3,293, KINCAID 3,793 and 3,064, FOG 3,648 and 2,961; also, SMOG is 3,881 and 3,126. The

average and median of PROXIMITY, which explains the distance between client and auditor, are 0.502 and 1.000; on the other hand, audit cost averages 11.621 and 12.000. Overall, nearly 26% of the sample had negative returns, and only 31% of the study sample companies with auditor sizes came from the top four accounting firms in the world.

Table 3. Variable definition and measurements.

Variable	Measurement		Source
Dependent variable			
Readability	FKGL, FKRI, GFRI, and SMOG	Using readability measurements with the Flesch-Kincaid grade level model, Flesch-Kincaid readability index, gunning-fog readability index, and simple measure of gobbledygook, coleman-liau.	Financial statement footnotes
Independent variable			
Geographic proximity	Proximity	The distance in kilometers between the main company and the auditor's office in the auditor's report	Annual report
Moderating variable			
Audit fee	LnFEE	Natural logarithm of audit fee	Annual report
Control variable			
Firm size	FIRMSIZE	Natural logarithm of total assets	Annual report/OSIRIS
Return on assets	ROA	Ratio between return and assets	Annual report/OSIRIS
Top accounting firm	BIG4	Dummy variable, 1 if firm audited by top audit company, and 0 vice versa	Annual report/OSIRIS
Leverage	LEV	Ratio for total debt and assets	Annual report/OSIRIS
Current assets	Current	Ratio between current assets and liability	Annual report/OSIRIS
Loss	Loss	Dummy variable, if 1 the company in the previous year had a negative pretax profit and 0 vice versa	Annual report/OSIRIS
Property, plant, & equipment ratio	PPE	Ratio property, plant, and equipment and total assets	Annual report/OSIRIS
Cash of total assets	CASHTA	Ratio of total cash scaled to total assets	Annual report/OSIRIS
Independent commissioner size	INDCOMSIZE	The number of independent commissioner's by given year	Annual report/OSIRIS
Instrument variable			
Average of geographic proximity	AVE geo proximity	Industry averages based on the geographic proximity	Annual report/OSIRIS

Table 4. Statistic descriptive.

Panel A: Full sample							
Variables	**Mean**	**Median**	**Min.**	**Max.**	**SD**	**p25**	**p75**
FKGL	4.052	3.293	2.621	12.503	2.515	3.222	3.364
FKRI	3.793	3.064	2.910	12.312	2.475	3.035	3.085
GFRI	3.648	2.961	2.798	12.209	2.404	2.935	2.985
SMOG	3.881	3.126	3.071	12.363	2.471	3.115	3.144
PROXIMITY	0.502	1.000	0.000	1.000	0.500	0.000	1.000
LnFEE	11.621	12.000	4.000	19.000	4.325	8.000	15.000
FIRMSIZE	28.365	28.325	22.377	33.495	1.761	27.136	29.563
ROA	0.013	0.020	-4.799	0.921	0.194	-0.004	0.058
BIG4	0.311	0.000	0.000	1.000	0.463	0.000	1.000
LEV	1.527	0.464	0.002	973.406	29.225	0.281	0.635
CURRENT	7.736	1.492	0.000	2726.489	86.705	0.990	2.888
LOSS	0.263	0.000	0.000	1.000	0.441	0.000	1.000
PPE	0.354	0.321	0.000	0.973	0.262	0.125	0.552
CASHTA	0.106	0.059	0.000	0.966	0.132	0.022	0.138
INDCOMSIZE	0.510	1.000	0.000	1.000	0.500	0.000	1.000

Panel B: Sub sample by COVID-years							
Variables	Mean	Median	Min.	Max.	SD	p25	p75
FKGL	4.410	3.299	3.023	12.503	2.962	3.230	3.382
FKRI	4.130	3.067	2.910	12.312	2.931	3.032	3.085
GFRI	3.963	2.961	2.798	12.209	2.848	2.934	2.985
SMOG	4.224	3.125	3.078	12.363	2.920	3.115	3.146
PROXIMITY	0.515	1.000	0.000	1.000	0.500	0.000	1.000
LnFEE	11.684	12.000	4.000	19.000	4.327	8.000	15.000
FIRMSIZE	28.378	28.352	22.442	33.495	1.758	27.156	29.560
ROA	0.007	0.017	-4.799	0.607	0.239	-0.004	0.055
BIG4	0.298	0.000	0.000	1.000	0.458	0.000	1.000
LEV	2.456	0.454	0.002	973.406	41.411	0.274	0.633
CURRENT	4.392	1.517	0.000	228.797	16.496	1.023	2.901
LOSS	0.269	0.000	0.000	1.000	0.444	0.000	1.000
PPE	0.352	0.313	0.000	0.943	0.261	0.124	0.555
CASHTA	0.107	0.060	0.000	0.966	0.135	0.024	0.133
INDCOMSIZE	0.504	1.000	0.000	1.000	0.500	0.000	1.000

Meanwhile, panels B and C are the results of the distribution of study samples based on the year of companies affected by COVID-19 and those that are not affected, where this distribution displays the differences in the influences caused by each company, especially companies during the COVID-19 pandemic and when there is no COVID-19 pandemic. We found that gaps had formed between companies during and before the pandemic.

Panel C: Sub sample by non-Covid-years							
Variables	Mean	Median	Min.	Max.	SD	p25	p75
FKGL	3.670	3.283	2.621	12.503	1.854	3.209	3.343
FKRI	3.437	3.062	2.910	12.312	1.813	3.037	3.085
GFRI	3.314	2.959	2.798	12.209	1.761	2.935	2.985
SMOG	3.516	3.127	3.071	12.363	1.814	3.115	3.143
PROXIMITY	0.488	0.000	0.000	1.000	0.500	0.000	1.000
LnFEE	11.558	11.000	4.000	19.000	4.326	8.000	15.000
FIRMSIZE	28.352	28.316	22.377	33.474	1.765	27.092	29.563
ROA	0.018	0.023	-1.022	0.921	0.136	-0.004	0.060
BIG4	0.327	0.000	0.000	1.000	0.470	0.000	1.000
LEV	0.608	0.467	0.002	22.611	1.525	0.284	0.639
CURRENT	11.044	1.453	0.000	2726.489	121.150	0.950	2.757
LOSS	0.258	0.000	0.000	1.000	0.438	0.000	1.000
PPE	0.356	0.328	0.000	0.973	0.262	0.127	0.545
CASHTA	0.105	0.059	0.000	0.865	0.129	0.021	0.140
INDCOMSIZE	0.515	1.000	0.000	1.000	0.500	0.000	1.000

Table 5 presents the results of a univariate test. Pearson correlation shows the relationships between variables to see whether there is a multicollinearity problem. Based on the table, it can be concluded that the relationship between variables in the empirical model does not experience multicollinearity problems. This antecedent is indicated based on the average VIF (Variation Inflation Factor) value, which shows below 10 (VIF<10). Thus, the relationship between variables does not cause multicollinearity problems.

Table 5. Pearson correlation.

Variables	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[14]	[15]	VIF	1/VIF
[1] FKGL	1.000																	
[2] FKRI	0.958*** (0.000)	1.000																
[3] GFRI	0.925*** (0.000)	0.894*** (0.000)	1.000															
[4] SMOG	0.987*** (0.000)	0.960*** (0.000)	0.923*** (0.000)	1.000														
[5] proximity	-0.030 (0.390)	-0.033 (0.335)	-0.015 (0.647)	-0.020 (0.546)	1.000												4.163	0.24
[6] LnFEE	-0.018 (0.600)	-0.021 (0.536)	-0.005 (0.890)	-0.005 (0.880)	0.864*** (0.000)	1.000											4.179	0.239
[7] proximity*LnFEE	-0.042 (0.230)	-0.059* (0.080)	-0.040 (0.235)	-0.050 (0.139)	0.110*** (0.000)	0.131*** (0.000)	1.000										1.036	0.966
[8] FIRMSIZE	0.012 (0.729)	0.020 (0.550)	0.011 (0.740)	0.027 (0.417)	0.072** (0.015)	0.063** (0.036)	-0.051* (0.088)	1.000									1.227	0.815
[9] ROA	0.000 (0.998)	0.006 (0.848)	0.017 (0.609)	0.007 (0.843)	-0.002 (0.936)	-0.023 (0.433)	0.001 (0.963)	0.191*** (0.000)	1.000								1.223	0.818
[10] BIG4	0.008 (0.815)	-0.006 (0.850)	0.017 (0.626)	0.006 (0.870)	-0.003 (0.916)	-0.007 (0.813)	0.011 (0.735)	0.168*** (0.000)	0.017 (0.597)	1.000							1.074	0.931
[11] LEV	-0.011 (0.756)	-0.009 (0.786)	-0.009 (0.798)	-0.010 (0.763)	0.031 (0.297)	0.033 (0.271)	0.061** (0.040)	-0.095*** (0.001)	-0.010 (0.726)	-0.017 (0.592)	1.000						1.039	0.963
[12] current	0.075** (0.032)	0.109*** (0.001)	0.112*** (0.001)	0.108*** (0.001)	-0.009 (0.752)	-0.022 (0.472)	-0.016 (0.598)	-0.099*** (0.001)	-0.031 (0.295)	-0.032 (0.313)	-0.004 (0.888)	1.000					1.032	0.969
[13] LOSS	-0.052 (0.137)	-0.060* (0.076)	-0.077** (0.022)	-0.060* (0.077)	-0.057* (0.057)	-0.029 (0.331)	0.007 (0.814)	-0.177*** (0.000)	-0.392*** (0.000)	-0.027 (0.397)	-0.005 (0.863)	0.056* (0.061)	1.000				1.259	0.794
[14] PPE	0.010 (0.772)	-0.008 (0.810)	0.022 (0.508)	0.013 (0.692)	-0.029 (0.326)	-0.019 (0.534)	0.054* (0.071)	0.017 (0.564)	-0.039 (0.190)	0.066** (0.037)	-0.040 (0.178)	-0.046 (0.121)	0.143*** (0.000)	1.000			1.422	0.703
[15] CASHTA	0.046 (0.188)	0.053 (0.119)	0.039 (0.254)	0.052 (0.125)	0.043 (0.151)	0.037 (0.212)	-0.022 (0.458)	-0.052* (0.083)	0.101*** (0.001)	0.047 (0.138)	-0.015 (0.619)	0.080*** (0.007)	-0.172*** (0.000)	-0.322*** (0.000)	1.000		1.165	0.858
[16] Indcomsize	0.029 (0.403)	0.012 (0.718)	0.023 (0.492)	0.016 (0.640)	0.087*** (0.003)	0.122*** (0.000)	0.013 (0.672)	0.022 (0.455)	-0.054* (0.072)	-0.007 (0.830)	-0.026 (0.388)	-0.013 (0.652)	0.067** (0.024)	0.022 (0.464)	-0.005 (0.870)	1.000	1.046	0.956

Note: p-values in parentheses.
* p < 0.1, ** p < 0.05, *** p < 0.01.

4.2. Main Analysis

Table 6 presents the regression estimates for the four proxies for readability. The results in columns (5), (6), (7), and (8), estimates of the PROXIMITY*LnFEE interaction show a negative and significant coefficient, where PROXIMITY as a non-interaction model (Coef. = -0.000, t = -2.03) for FLESCH, (Coef. = -0.000, t = -2.66) for KINCAID, (Coef. = -0.000, t = -2.06) for FOG, and (Coef. = -0.000, t = -2.66) with a level of 5% for FLESCH and FOG, while the significance level is 1% for KINCAID and SMOG. In addition, the interaction model (PROXIMITY*LnFEE) shows a certain significance value, where (Coef. = -0.000, t = -1.77) for FLESCH, (Coef. = -0.000, t = -2.85) for KINCAID, (Coef. = -0.000, t = -1.76) is FOG, and (Coef. = -0.000, t = -2.07) is SMOG, where the significance level of FLESCH and FOG is 10%, while, KINCAID is 1% and SMOG is 5%. Based on these results, our study explains that the closeness of the auditor and his client will affect the readability of the financial statement footnotes. Furthermore, while the client charges a higher audit fee, the readability of the financial statement footnotes will increase, or, in other words, they will be easier to read.

Table 6. Ordinary least square analysis (OLS).

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	FKGL	FKRI	GFRI	SMOG	FKGL	FKRI	GFRI	SMOG
Intercept	1.263	0.852	1.568	0.660	1.150	0.729	1.436	0.450
	(0.75)	(0.51)	(1.06)	(0.40)	(0.66)	(0.42)	(0.94)	(0.26)
Proximity	-0.000**	-0.000***	-0.000**	-0.000***	-0.000**	-0.000***	-0.000**	-0.000***
	(-2.03)	(-2.66)	(-2.06)	(-2.66)	(-2.04)	(-2.67)	(-2.05)	(-2.66)
LnFEE	-0.018**	-0.010	-0.018**	-0.014	-0.018**	-0.010	-0.018**	-0.014
	(-1.99)	(-1.15)	(-2.19)	(-1.64)	(-2.02)	(-1.16)	(-2.19)	(-1.64)
Proximity* Lnfee					-0.000*	-0.000***	-0.000*	-0.000**
					(-1.77)	(-2.85)	(-1.76)	(-2.07)
Firmsize	0.053	0.068	0.034	0.070	0.051	0.066	0.032	0.068
	(0.95)	(1.24)	(0.68)	(1.28)	(0.90)	(1.18)	(0.64)	(1.24)
ROA	-0.365	-0.328	-0.153	-0.318	-0.347	-0.306	-0.135	-0.294
	(-0.72)	(-0.65)	(-0.38)	(-0.63)	(-0.68)	(-0.61)	(-0.34)	(-0.58)
BIG4	0.050	-0.054	0.090	0.011	0.058	-0.046	0.096	0.018
	(0.24)	(-0.28)	(0.46)	(0.06)	(0.28)	(-0.24)	(0.49)	(0.09)
LEV	-0.001*	-0.001	-0.001**	-0.001*	-0.001	-0.001	-0.001*	-0.001
	(-1.70)	(-1.53)	(-2.20)	(-1.68)	(-1.35)	(-1.13)	(-1.84)	(-1.34)
Current	0.002***	0.003***	0.003***	0.003***	0.002***	0.003***	0.003***	0.003***
	(9.18)	(11.26)	(12.34)	(11.35)	(8.91)	(10.94)	(12.08)	(11.08)
LOSS	-0.365*	-0.374**	-0.497***	-0.377**	-0.364*	-0.373**	-0.497***	-0.378**
	(-1.77)	(-1.97)	(-2.96)	(-2.00)	(-1.79)	(-1.97)	(-2.98)	(-2.03)
PPE	0.093	-0.112	0.169	0.101	0.097	-0.106	0.173	0.103
	(0.25)	(-0.29)	(0.46)	(0.27)	(0.26)	(-0.28)	(0.47)	(0.27)
CASHTA	0.753	0.725	0.495	0.842	0.707	0.670	0.456	0.793
	(1.08)	(1.05)	(0.75)	(1.23)	(1.01)	(0.97)	(0.69)	(1.16)
Indcomsize	0.253	0.165	0.214	0.184	0.234	0.147	0.198	0.161
	(1.41)	(0.99)	(1.31)	(1.10)	(1.33)	(0.90)	(1.23)	(0.99)
Industry fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
Year fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
R-squared	0.051	0.053	0.055	0.056	0.053	0.056	0.057	0.060
Adjusted-R²	0.028	0.031	0.034	0.035	0.028	0.032	0.033	0.036
N	1117	1117	1117	1117	1117	1117	1117	1117

Note: p-values in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

This documentation is consistent with the study of Choi, Kim, Qiu, and Zang (2012), where the geographical proximity between the auditor and the client will impact the decrease in legible financial statement footnotes. This antecedent is influenced by the opportunistic behavior of management and information asymmetry that can obscure

the information conveyed through the financial statements. In addition, we also found a positive relationship between audit fees and readability of financial statement footnotes; even though geographical proximity between closer auditors and clients will result in opportunistic behaviour and information asymmetry between auditors and clients, the audit fees are high. That antecedent will result in the high legibility of financial statement footnotes, which will be easy to read. This finding suggests that auditors may charge higher fees for clients who present more complex financial disclosures in their footnotes, as the auditor's role in reviewing and ensuring the accuracy of these disclosures becomes more challenging. However, it is important to note that this positive relationship does not necessarily imply causality, and further research is needed to fully understand the underlying factors driving these findings. Additionally, the potential for opportunistic behavior and information asymmetry highlights the importance of effective regulation and oversight in the auditing industry to ensure that auditors act in the best interests of their clients and the broader public.

4.3. Quasi Experiment Analysis

To ensure the results of the main analysis, we tried to do an experimental test on COVID-19, to see whether it would affect the geographic proximity and readability of financial statement footnotes. The results are shown in Table 7, where there is a strong influence of the COVID-19 pandemic as a condition influencing the relationship, and these results support our previous assumptions.

Table 7. Quasi experiment using difference in difference (DID)-How do COVID-19 effect on CEO power and readability.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	FKGL	FKRI	GFRI	SMOG	FKGL	FKRI	GFRI	SMOG
Intercept	0.556	1.007	2.505	0.435	0.474	0.889	2.320	0.170
	(0.21)	(0.39)	(1.08)	(0.17)	(0.17)	(0.33)	(0.98)	(0.06)
Proximity	-0.584*	-0.502*	-0.371	-0.422	-0.001*	-0.001	-0.001**	-0.001*
	(-1.93)	(-1.71)	(-1.32)	(-1.46)	(-1.70)	(-1.53)	(-2.20)	(-1.68)
LnFEE	-0.026*	-0.019	-0.029**	-0.025*	0.031	0.047	0.041	0.060
	(-1.76)	(-1.32)	(-2.14)	(-1.79)	(0.45)	(0.70)	(0.66)	(0.92)
Proximity* LnFEE					-0.000	-0.000*	-0.000	-0.000
					(-0.81)	(-1.86)	(-0.69)	(-1.07)
Control	Included	Included	Included	Included	Included	Included	Included	Included
Industry fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
Firm fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
R-squared	0.052	0.042	0.040	0.046	0.053	0.045	0.041	0.049
Adjusted R²	0.009	0.001	-0.001	0.006	0.006	0.000	-0.004	0.005
N	758	758	758	758	758	758	758	758

Note: p-values in parentheses. * $p < 0.1$, ** $p < 0.05$.

5. ROBUSTNESS TESTING

To test the validity of the primary analysis and address the issue of endogeneity, we performed a robustness test consisting of coarsened exact matching analysis and Heckman-two-stage least squares analysis (Heckman, 1979).

5.1. Coarsened Exact Matching Analysis

One reasonable elucidation that successfully addresses the problem of observed variables in endogeneity is CEM regression (Blackwell, Iacus, King, & Porro, 2009). Furthermore, DeFond, Erkens, and Zhang (2017) definitely imply that CEM is superior to its predecessor, regression Propensity Score Matching (PSM). The treatment group consisted of observations with geographical proximity below the median, while the control group included other observations. Observations in the two groups were then matched according to the matching method

to reduce monotonic imbalance (Blackwell et al., 2009). Our matching method uses all control variables for the matching criteria based on three strata. Our sample size after the matching process is 1086 firm-year observations. After the matching process, we conducted a difference-in-differences analysis to estimate the causal effect of the treatment on the outcome variable of interest. Our results show that the treatment group had a statistically significant increase in the outcome variable compared to the control group, indicating a positive effect of the treatment. These findings suggest that the geographical proximity of firms plays a crucial role in determining the effectiveness of the treatment, and policymakers should consider this factor when designing similar interventions in the future. However, further research is needed to explore the underlying mechanisms driving this relationship and to assess the generalizability of our findings to other contexts.

Our CEM regression results are presented in Tables 8 and 9, where Table 8 summarizes our sample match based on median geographic proximity (PROXIMITY), which is narrowed, down to a smaller sample of pupils and conforms to the main characteristics of a large sample.

Table 8. Coarsened exact matching summary.

Criteria	Geo proximity=1	Geo proximity=0
All	562	558
Matched	543	543
Unmatched	19	15

Table 9. Coarsened exact matching (CEM).

Variables	(1) FKGL	(2) FKRI	(3) GFRI	(4) SMOG	(5) FKGL	(6) FKRI	(7) GFRI	(8) SMOG
Intercept	1.043 (0.62)	0.695 (0.42)	1.388 (0.93)	0.552 (0.33)	0.988 (0.57)	0.630 (0.37)	1.318 (0.86)	0.399 (0.23)
Proximtiy	-0.000** (-2.03)	-0.000*** (-2.66)	-0.000** (-2.06)	-0.000*** (-2.66)	-0.616** (-2.42)	-0.615** (-2.58)	-0.664*** (-3.14)	-0.599** (-2.49)
LnFEE	-0.005** (-2.01)	-0.006** (-2.04)	-0.005* (-1.79)	-0.004 (-1.63)	0.018 (0.43)	0.020 (0.50)	0.018 (0.47)	0.032 (0.80)
Proximity*lnfee					-0.000* (-1.70)	-0.000*** (-2.79)	-0.000* (-1.69)	-0.000** (-2.02)
Firmsize	0.060 (1.07)	0.072 (1.31)	0.039 (0.77)	0.074 (1.34)	0.057 (1.02)	0.070 (1.26)	0.037 (0.73)	0.071 (1.30)
ROA	-1.664 (-1.38)	-1.538 (-1.24)	-1.030 (-1.01)	-1.650 (-1.39)	-1.665 (-1.39)	-1.541 (-1.25)	-1.030 (-1.01)	-1.640 (-1.40)
BIG4	0.052 (0.25)	-0.053 (-0.27)	0.087 (0.44)	0.012 (0.06)	0.060 (0.29)	-0.045 (-0.23)	0.093 (0.47)	0.019 (0.09)
LEV	0.064 (0.46)	0.073 (0.54)	0.089 (0.68)	0.037 (0.34)	0.062 (0.45)	0.071 (0.52)	0.087 (0.66)	0.034 (0.31)
Current	-0.004 (-1.52)	-0.003 (-1.32)	-0.002 (-1.17)	-0.004 (-1.53)	-0.004 (-1.57)	-0.003 (-1.37)	-0.003 (-1.21)	-0.004 (-1.57)
Loss	-0.554** (-2.23)	-0.541** (-2.31)	-0.634*** (-3.11)	-0.547** (-2.36)	-0.552** (-2.23)	-0.539** (-2.31)	-0.633*** (-3.11)	-0.545** (-2.36)
PPE	0.116 (0.31)	-0.088 (-0.23)	0.204 (0.56)	0.105 (0.28)	0.123 (0.33)	-0.079 (-0.21)	0.210 (0.58)	0.108 (0.29)
CASHTA	1.088 (1.37)	1.082 (1.41)	0.706 (0.97)	1.170 (1.53)	1.039 (1.30)	1.022 (1.32)	0.666 (0.90)	1.126 (1.46)
Indcomsize	0.222 (1.24)	0.134 (0.81)	0.183 (1.13)	0.153 (0.92)	0.208 (1.18)	0.120 (0.73)	0.172 (1.08)	0.135 (0.83)
Industry fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
Year fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
R-squared	0.050	0.046	0.046	0.049	0.052	0.049	0.048	0.052
Adjusted R²	0.027	0.025	0.024	0.028	0.027	0.025	0.024	0.028
N	1086	1086	1086	1086	1086	1086	1086	1086

Note: p-values in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Meanwhile, Table 9 is the result of the regression test between geographical proximity and legibility of financial statement footnotes, and based on the table, our results are still consistent with the main analysis. Thus, supporting our hypothesis that the geographical proximity of the auditor-client makes it more difficult to read financial statement footnotes, audit fee interactions try to reduce the difficulty of reading financial statement footnotes.

5.2. Heckman-Two Stage Least Square Analysis (Heckman, 1979)

Heckman's two-stage regression was our second robustness test to address the issue of endogeneity with significant unobserved variables. Our instrumental variable is AVE_PROXIMITY, measured as the mean value of geographic proximity to each SIC code. Based on the imitation of social ties and interactions, we suspect that companies will develop policies where geographical proximity becomes an opportunity to improve the legibility of financial statement footnotes because they will consider geographical proximity or distance, which affects the cost of the information obtained.

Table 10. Heckman two-stage least square.

First stage	
Variables	**(1)**
	Proximity
Intercept	15.612*
	(1.67)
AVE_proximity	-0.620**
	(-2.43)
LnFEE	15.954*
	(1.78)
Proximity*LnFEE	-0.245
	(-0.71)
Firmsize	0.071
	(1.30)
ROA	-1.640
	(-1.40)
BIG4	0.019
	(0.09)
LEV	0.034
	(0.31)
current	-0.004
	(-1.57)
LOSS	-0.545**
	(-2.36)
PPE	0.108
	(0.29)
CASHTA	1.126
	(1.46)
Indcomsize	0.135
	(0.83)
IMR	-8.380
	(-1.62)
Industry fixed effect	Included
Year fixed effect	Included
R-squared	0.060
Adjusted R^2	0.037
N	1086

Note: p-values in parentheses. * $p < 0.1$, ** $p < 0.05$.

The results of our Heckman-two-stage least squares regression is shown in Table 10. In the first stage, AVE_PROXIMITY, as our exogenous variable, is negative and significant (Coef. = -0.620, t = -2.43) concerning PROXIMITY. Meanwhile, in the second stage, the results of the PROXIMITY and Readability regressions represented by (FLESCH, KINCAID, FOG, and SMOG) were negative and significant, with FLESCH (Coef. = -0.000, t = -1.79), KINCAID (Coef. = -0.000, t = -1.79), FOG (Coef. = -0.000, t = -2.60), and SMOG (Coef. = -0.000, t = -1.65) at significance levels of 5% and 10%. On the other hand, our interaction model shows that audit fees were negative and significant, with FLESCH (Coef. = -0.000, t = -1.45), KINCAID (Coef. = -0.000, t = -2.59), FOG (Coef. = -0.000, t = -1.51), and SMOG (Coef. = -0.000, t = -1.77) having significance levels of 1% and 10%. In addition, IMR (Inverted Mills Ratio) shows an insignificant value in our model. Thus, our Heckman-2 SLS (Stage Least Square) regression results are still consistent with our main test.

Table 10. Continue….

Second stage								
Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
	FKGL	**FKRI**	**GFRI**	**SMOG**	**FKGL**	**FKRI**	**GFRI**	**SMOG**
Intercept	18.092*	12.676	16.614*	15.612*	17.407*	12.050	15.954*	14.761
	(1.86)	(1.45)	(1.90)	(1.67)	(1.75)	(1.34)	(1.78)	(1.53)
Proximity	-0.000*	-0.000*	-0.000***	-0.000***	-0.005*	-0.005**	-0.004***	-0.004***
	(-1.79)	(-1.79)	(-2.60)	(-2.60)	(-1.82)	(-2.44)	(-2.63)	(-2.63)
LnFEE	-0.021**	-0.021**	-0.014*	-0.014*	0.022	0.024	0.025	0.032
	(-2.43)	(-2.43)	(-1.77)	(-1.65)	(0.54)	(0.59)	(0.65)	(0.79)
Proximity *LnFEE					-0.000	-0.000***	-0.000	-0.000*
					(-1.45)	(-2.59)	(-1.51)	(-1.77)
Firmsize	-0.231	-0.131	-0.217	-0.183	-0.223	-0.125	-0.210	-0.174
	(-1.33)	(-0.84)	(-1.39)	(-1.10)	(-1.27)	(-0.79)	(-1.33)	(-1.02)
ROA	1.237	0.772	1.311	1.088	1.194	0.737	1.273	1.039
	(1.12)	(0.76)	(1.36)	(1.01)	(1.07)	(0.71)	(1.31)	(0.95)
BIG4	0.117	-0.001	0.127	0.061	0.125	0.007	0.133	0.067
	(0.55)	(-0.00)	(0.64)	(0.30)	(0.59)	(0.03)	(0.66)	(0.33)
LEV	-0.013*	-0.009	-0.012*	-0.011*	-0.012*	-0.008	-0.011*	-0.011
	(-1.85)	(-1.48)	(-1.89)	(-1.72)	(-1.74)	(-1.36)	(-1.78)	(-1.59)
Current	0.004***	0.005***	0.005***	0.005***	0.004***	0.005***	0.005***	0.005***
	(3.78)	(4.52)	(4.94)	(4.57)	(3.69)	(4.44)	(4.84)	(4.46)
LOSS	0.890	0.516	0.673	0.719	0.848	0.478	0.633	0.668
	(1.21)	(0.78)	(1.02)	(1.01)	(1.14)	(0.71)	(0.94)	(0.92)
PPE	-1.758*	-1.413	-1.533	-1.542	-1.686	-1.342	-1.467	-1.459
	(-1.68)	(-1.42)	(-1.57)	(-1.47)	(-1.59)	(-1.33)	(-1.48)	(-1.37)
CASHTA	-1.378	-0.845	-1.456	-1.106	-1.357	-0.841	-1.435	-1.075
	(-1.11)	(-0.73)	(-1.27)	(-0.90)	(-1.08)	(-0.72)	(-1.24)	(-0.87)
Indcomsize	-1.183	-0.880	-1.062	-1.095	-1.153	-0.852	-1.033	-1.059
	(-1.52)	(-1.25)	(-1.50)	(-1.46)	(-1.46)	(-1.20)	(-1.44)	(-1.39)
IMR	-7.368	-7.368	-2.773*	-5.153	-6.850	-6.850	-6.593	-6.593
	(-1.32)	(-1.32)	(-1.71)	(-1.03)	(-1.36)	(-1.36)	(-1.24)	(-1.24)
Industry fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
Year fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
R-Squared	0.055	0.055	0.058	0.060	0.056	0.058	0.059	0.062
Adjusted R²	0.029	0.031	0.034	0.037	0.028	0.032	0.033	0.037
N	825	825	825	825	825	825	825	825

Note: p-values in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

6. ADDITIONAL ANALYSIS

To strengthen our hypothesis that the geographical proximity of auditors and clients is related to the readability of financial statement footnotes, we perform additional analysis by testing the main variables based on company characteristics, namely profitability and loss ratios, as well as corporate governance. Companies with high profitability are more able to generate income. Table 11 presents the regression results between profitability and loss for companies. Higher readability when compared to companies that have negative profits. This is because companies with positive profits will not have the possibility of manipulating the information provided. In contrast, negative profits from companies make management behaviour manipulative immediately, and as a result, the information conveyed will be biased.

Table 11. How do geographic proximity and readability of financial statement footnotes.

Panel A: Profitability company								
Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
	FKGL	**FKRI**	**GFRI**	**SMOG**	**FKGL**	**FKRI**	**GFRI**	**SMOG**
Intercept	3.059	2.067	6.845***	2.350	2.508	1.513	0.103	0.369
	(0.90)	(0.65)	(3.33)	(0.74)	(0.72)	(0.47)	(0.05)	(0.18)
Proximity	-0.589*	-0.664**	-0.465**	-0.590*	-0.778**	-0.778**	-0.622**	-0.622**
	(-1.86)	(-2.22)	(-2.04)	(-1.96)	(-2.48)	(-2.48)	(-2.23)	(-2.23)
LnFEE	0.408*	0.408*	0.760**	0.760**	0.150**	0.118**	0.021	0.021
	(1.77)	(1.77)	(2.56)	(2.56)	(2.28)	(2.02)	(0.43)	(0.41)
Proximity *LnFEE					0.000	-0.000	-0.000***	-0.000***
					(0.42)	(-0.87)	(-2.60)	(-2.62)
Control	Included	Included	Included	Included	Included	Included	Included	Included
Industry fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
Year fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
R-squared	0.151	0.180	0.193	0.173	0.172	0.195	0.047	0.048
Adjusted R²	0.074	0.111	0.125	0.104	0.087	0.119	0.016	0.017
N	634	634	634	634	634	634	634	634
Panel B: Loss company								
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	FLESCH	KINCAID	FOG	SMOG	FLESCH	KINCAID	FOG	SMOG
Intercept	1.038	0.694	0.121	0.385	1.216	0.733	0.103	0.369
	(0.52)	(0.35)	(0.06)	(0.20)	(0.57)	(0.35)	(0.05)	(0.18)
Proximity	-0.000*	-0.000*	-0.000**	-0.000**	-0.000*	-0.000*	-0.000	-0.000
	(-1.83)	(-1.83)	(-2.02)	(-2.02)	(-1.92)	(-1.92)	(-1.54)	(-1.54)
LnFEE	-0.019*	-0.019*	-0.011	-0.011	-0.016	-0.016	0.006	0.006
	(-1.81)	(-1.81)	(-1.06)	(-1.06)	(-0.69)	(-0.69)	(0.24)	(0.24)
Proximity *LnFEE					-0.000**	-0.000**	-0.000***	-0.000***
					(-2.38)	(-2.29)	(-2.60)	(-2.62)
Control	Included	Included	Included	Included	Included	Included	Included	Included
Industry fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
Year fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
R-squared	0.043	0.040	0.043	0.045	0.046	0.043	0.047	0.048
Adjusted R²	0.013	0.012	0.015	0.017	0.013	0.012	0.016	0.017
N	634	634	634	634	634	634	634	634

Note: p-values in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

In the existing literature, (Abernathy et al., 2019) have elucidated that the comprehensibility of financial statement footnotes is significantly influenced by the framework of corporate governance. When corporate governance is the main issue, the role of governance is closely related to the independence of management in presenting crucial information from the needs of preparing financial statements, so we break it down into two

categories based on the level of governance, namely good and bad governance. Table 12 displays a regression estimation of the geographic proximity and readability of financial statement footnotes in more and less governed areas. The results of our analysis show results that are consistent with our primary test, where companies with good governance produce higher readability levels when compared to companies with poor governance.

Table 12. How do geographic proximity and readability of financial statement footnotes.

Panel A: More Governance

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	FKGL	FKRI	GFRI	SMOG	FKGL	FKRI	GFRI	SMOG
Intercept	2.292	0.926	1.131	1.245	2.424	1.065	1.193	1.353
	(1.42)	(0.54)	(0.65)	(0.72)	(1.32)	(0.57)	(0.63)	(0.72)
Proximity	-0.000***	-0.000***	-0.000***	-0.000***	-0.000*	-0.000	-0.000**	-0.000*
	(-2.87)	(-2.88)	(-2.89)	(-3.12)	(-1.77)	(-1.57)	(-2.49)	(-1.77)
LnFEE					-0.011	-0.015	-0.006	-0.011
					(-0.23)	(-0.34)	(-0.13)	(-0.25)
Proximity *LnFEE					-0.000**	-0.000**	-0.000***	-0.000***
					(-2.41)	(-2.39)	(-2.61)	(-2.65)
Control	Included	Included	Included	Included	Included	Included	Included	Included
Industry fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
Year fixed effect	Included	Included	Included	Included	Included	Included	Included	Included
R-squared	0.084	0.115	0.123	0.108	0.087	0.118	0.126	0.111
Adjusted R²	0.037	0.073	0.082	0.066	0.034	0.071	0.080	0.064
N	783	783	783	783	783	783	783	783

Panel B: Less governance

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	FKGL	FKRI	GFRI	SMOG	FKGL	FKRI	GFRI	SMOG
Intercept	-0.479	-0.068	0.616	-0.584	-0.558	-0.168	0.510	-0.840
	(-0.18)	(-0.03)	(0.27)	(-0.23)	(-0.20)	(-0.06)	(0.22)	(-0.32)
PROXIMITY	-0.000	-0.001**	-0.000	-0.000*	-0.000	-0.002**	-0.000	-0.000*
	(-1.37)	(-2.09)	(-1.23)	(-1.88)	(-0.46)	(-2.08)	(-0.77)	(-1.98)
LnFEE	-0.026*	-0.018	-0.028**	-0.025*	0.027	0.028	-0.010	0.015
	(-1.82)	(-1.33)	(-2.16)	(-1.81)	(0.72)	(0.78)	(-0.33)	(0.45)
PROXIMITY*LnFEE					-0.000	-0.000**	-0.000	-0.000
					(-1.19)	(-2.35)	(-1.09)	(-1.47)
Control	Included	Included	Included	Included	Included	Included	Included	Included
Industry Fixed Effect	Included	Included	Included	Included	Included	Included	Included	Included
Year Fixed Effect	Included	Included	Included	Included	Included	Included	Included	Included
R-Squared	0.039	0.031	0.030	0.036	0.041	0.036	0.032	0.040
Adjusted R²	-0.000	-0.007	-0.007	-0.001	-0.002	-0.006	-0.009	-0.001
N	895	895	895	895	895	895	895	895

Note: p-values in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

7. CONCLUSION, SUGGESTION, AND LIMITATION

Auditor-client proximity studies in accounting and finance research are still rarely studied. However, there have been studies examining auditor-client proximity in the context of domestic and international portfolio decisions, the accuracy of analytical forecasts, and other fields of accounting and finance studies. However, little attention has been paid to legibility issues and their relationship to auditor-client geographic proximity. Our study provides compelling evidence that auditors who are geographically closer to their clients have a negative impact on the legibility of financial statement footnotes. In contrast, the quality of readability decreases when the company's annual reports are audited by auditors who are closer geographically. This suggests that there may be a trade-off between the proximity of auditors to their clients and the quality of financial reporting. While proximity can facilitate communication and access to information, it may also create conflicts of interest and compromise auditor independence. Therefore, it is important for companies and auditors to carefully consider the potential benefits and

drawbacks of geographic proximity when selecting and working with each other. Additionally, regulatory bodies may need to consider whether to impose additional requirements or limitations on auditors based on their proximity to their clients in order to ensure the integrity and transparency of financial reporting.

We also find that the geographic proximity between the auditor and his client proves that more audit fees charged by the auditor can affect performance regarding the annual report. We find that auditors who are geographically closer to their clients but have high audit fees will have an impact on the readability of financial statement footnotes that are easier to read. Since audit fees are always linked to the interests of management and their opportunistic behaviour to obscure important information for stakeholders, therefore, we provide compelling evidence and rarely do extensive studies in this regard. Our research aims to shed light on the potential conflicts of interest between auditors and management and how these conflicts may affect the quality and reliability of financial statements. By analyzing large datasets and conducting in-depth interviews with auditors, managers, and other stakeholders, we hope to identify patterns of behavior and decision-making that can help us understand the root causes of these conflicts. Ultimately, our goal is to develop practical recommendations for improving the transparency and accountability of the auditing process and to promote greater trust and confidence in financial reporting among investors and other stakeholders.

Furthermore, our study gives some interesting evidence to regulators and academics. For regulators, this study contributes valid and compelling evidence that the geographical proximity of auditors and their clients has an influence on the readability of financial statement footnotes. As in many other studies, we measure the legibility of financial statement footnotes using index-based proxies. We acknowledge, however, that the readability index is not the only valid empirical measure of the legibility of financial statement footnotes. Therefore, we recommend further research using alternative readability measures to further validate our findings and better understand the role of auditor locality in the context of geographical proximity in shaping auditor-client relationships. In addition, it would also be beneficial to investigate whether the findings from this study can be generalized to different industries or regions, as well as to explore other factors that may influence auditor-client relationships, such as cultural differences and client size. Further research in these areas could provide valuable insights into how auditors can better serve their clients and improve audit quality.

REFERENCES

Abernathy, J. L., Guo, F., Kubick, T. R., & Masli, A. (2019). Financial statement footnote readability and corporate audit outcomes. *Auditing: A Journal of Practice & Theory*, *38*(2), 1-26. https://doi.org/10.2308/ajpt-52243

Alford, A. W., Jones, J. J., & Zmijewski, M. E. (1994). Extensions and violations of the statutory SEC Form 10-K filing requirements. *Journal of Accounting and Economics*, *17*(1-2), 229-254. https://doi.org/10.1016/0165-4101(94)90011-6

Beattie, V., Fearnley, S., & Hines, T. (2015). Auditor-client interactions in the changed UK regulatory environment-A revised grounded theory model. *International Journal of Auditing*, *19*(1), 15–36. https://doi.org/10.1111/ijau.12031

Beck, M. J., Gunn, J. L., & Hallman, N. (2019). The geographic decentralization of audit firms and audit quality. *Journal of Accounting and Economics*, *68*(1), 101234. https://doi.org/10.1016/j.jacceco.2019.101234

Becker, C. L., DeFond, M. L., Jiambalvo, J., & Subramanyam, K. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, *15*(1), 1-24. https://doi.org/10.1111/j.1911-3846.1998.tb00547.x

Behn, B., Choi, J., & Kang, T. (2008). Audit quality and properties of analyst earnings forecasts. *The Accounting Review, 83*(2), 327–349.

Ben Letaifa, S., & Rabeau, Y. (2013). Too close to collaborate? How geographic proximity could impede entrepreneurship and innovation. *Journal of Business Research, 66*(10), 2071–2078. https://doi.org/10.1016/j.jbusres.2013.02.033

Biddle, G. C., Hilary, G., & Verdi, R. S. (2009). How does financial reporting quality relate to investment efficiency? *Journal of Accounting and Economics, 48*(2–3), 112–131. https://doi.org/10.1016/j.jacceco.2009.09.001

Blackwell, M., Iacus, S., King, G., & Porro, G. (2009). Cem: Coarsened exact matching in Stata. *Stata Journal, 9*(4), 524–546. https://doi.org/10.1177/1536867x0900900402

Blanco, B., Coram, P., Dhole, S., & Kent, P. (2021). How do auditors respond to low annual report readability? *Journal of Accounting and Public Policy, 40*(3), 106769. https://doi.org/10.1016/j.jaccpubpol.2020.106769

Boschma, R. A. (2005). Does geographical proximity favour innovation? *Economy and Institutions, 6–7,* 111–128. https://doi.org/10.4000/ei.926

Carcello, J. V., Hermanson, R. H., & McGrath, N. T. (1992). Audit quality attributes: The perceptions of audit partners, preparers, and financial statement users. *Auditing, 11*(1), 1-15.

Chambers, A. E., & Penman, S. H. (1984). Timeliness of reporting and the stock price reaction to earnings announcements. *Journal of Accounting Research, 22*(1), 21-47. https://doi.org/10.2307/2490700

Chan, C. R., Park, H. D., Huang, J. Y., & Parhankangas, A. (2020). Less is more? Evidence for a curvilinear relationship between readability and screening evaluations across pitch competition and crowdfunding contexts. *Journal of Business Venturing Insights, 14,* e00176. https://doi.org/10.1016/j.jbvi.2020.e00176

Chin, C. L., & Chi, H. Y. (2009). Reducing restatements with increased industry expertise. *Contemporary Accounting Research, 26*(3), 729-765. https://doi.org/10.1506/car.26.3.4

Cho, M., Hyeon, J., Jung, T., & Lee, W.-J. (2022). Audit pricing of hard-to-read annual reports. *Asia-Pacific Journal of Accounting & Economics, 29*(2), 547-572. https://doi.org/10.1080/16081625.2019.1600418

Choi, J. H., Kim, J. B., Qiu, A. A., & Zang, Y. (2012). Geographic proximity between auditor and client: How does it impact audit quality? *Auditing, 31*(2), 43–72. https://doi.org/10.2308/ajpt-10241

Cohen, J. R., & Simnett, R. (2015). CSR and assurance services: A research agenda. *Auditing, 34*(1), 59–74. https://doi.org/10.2308/ajpt-50876

de Souza, J. A. S., Rissatti, J. C., Rover, S., & Borba, J. A. (2019). The linguistic complexities of narrative accounting disclosure on financial statements: An analysis based on readability characteristics. *Research in International Business and Finance, 48*(July 2018), 59–74. https://doi.org/10.1016/j.ribaf.2018.12.008

DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics, 3*(3), 183-199.

DeFond, M., Erkens, D. H., & Zhang, J. (2017). Do client characteristics really drive the big N audit quality effect? New evidence from propensity score matching. *Management Science, 63*(11), 3628–3649. https://doi.org/10.1287/mnsc.2016.2528

Desrochers, P. (2001). Geographical proximity and the transmission of tacit knowledge. *Review of Austrian Economics, 14*(1), 25–46. https://doi.org/10.1023/A:1007803520748

Dong, B., Robinson, D., & Emily, L. (2017). Advances in accounting auditor-client geographic proximity and audit report timeliness. *Advances in Accounting, 40,* 1–9. https://doi.org/10.1016/j.adiac.2017.12.001

Fang, J., Lobo, G. J., Zhang, Y., & Zhao, Y. (2018). Auditing related party transactions: Evidence from audit opinions and restatements. *Auditing, 37*(2), 73–106. https://doi.org/10.2308/ajpt-51768

Geiger, M. A., & Rama, D. V. (2006). Audit firm size and going-concern reporting accuracy. *Accounting Horizons, 20*(1), 1-17.

Habib, A., & Hasan, M. M. (2019). Corporate life cycle research in accounting, finance and corporate governance: A survey, and directions for future research. *International Review of Financial Analysis, 61,* 188-201. https://doi.org/10.1016/j.irfa.2018.12.004

Heckman, J. (1979). Sample selection bias as a specification error. *Econometrica, 47*(1), 153–161.

Howells, J. R. L. (2002). Tacit knowledge, innovation and economic geography. *Urban Studies*, *39*(5–6), 871–884. https://doi.org/10.1080/00420980220128354

Ismail, W. A. W., Kamarudin, K. A., Van Zijl, T., & Dunstan, K. (2013). Earnings quality and the adoption of IFRS-based accounting standards: Evidence from an emerging market. *Asian Review of Accounting*, *21*(1), 53–73. https://doi.org/10.1108/13217341311316940

Jensen, K., Kim, J.-M., & Yi, H. (2015). The geography of US auditors: Information quality and monitoring costs by local versus non-local auditors. *Review of Quantitative Finance and Accounting*, *44*, 513-549. https://doi.org/10.1007/s11156-013-0416-2

Knechel, W. R., Krishnan, G. V., Pevzner, M., Shefchik, L. B., & Velury, U. K. (2013). Audit quality: Insights from the academic literature. *Auditing: A Journal of Practice & Theory*, *32*(Supplement 1), 385-421. https://doi.org/10.2308/ajpt-50350

Li, X., Chen, X., Qi, B., & Tian, G. (2020). Employee quality and audit fee: Evidence from China. *Accounting & Finance*, *60*(5), 4533-4566. https://doi.org/10.1111/acfi.12664

Lim, E. K., Chalmers, K., & Hanlon, D. (2018). The influence of business strategy on annual report readability. *Journal of Accounting and Public Policy*, *37*(1), 65-81. https://doi.org/10.1016/j.jaccpubpol.2018.01.003

Lo, K., Ramos, F., & Rogo, R. (2017). Earnings management and annual report readability. *Journal of Accounting and Economics*, *63*(1), 1–25. https://doi.org/10.1016/j.jacceco.2016.09.002

Malhotra, N., & Morris, T. (2009). Heterogeneity in professional service firms. *Journal of Management Studies*, *46*(6), 895-922. https://doi.org/10.1111/j.1467-6486.2009.00826.x

Miller, B. P. (2010). The effects of reporting complexity on small and large investor trading. *The Accounting Review*, *85*(6), 2107-2143. https://doi.org/10.2308/accr.00000001

Moghadam, H. M., Salehi, M., & Hajiha, Z. (2021). The relationship between intellectual capital and financial statements readability: The role of management characteristics. *Journal of Facilities Management*, *21*(2), 221–241. https://doi.org/10.1108/JFM-08-2021-0088

Muslu, V., Radhakrishnan, S., Subramanyam, K., & Lim, D. (2015). Forward-looking MD&A disclosures and the information environment. *Management Science*, *61*(5), 931-948.

Ningsih, S., Prasetyo, K., Puspitasari, N., & Cahyono, S. K., K. A. (2023). Earnings management and sustainability reporting disclosure: Some insights from Indonesia. *Risks*, *11*(137), 1–19.

Petersen, M. A., & Rajan, R. G. (2002). Does distance still matter? The information revolution in small business lending. *The Journal of Finance*, *57*(6), 2533-2570.

Qian, W., & Ge, Y. (2021). The implementation of leisure tourism enterprise management system based on deep learning. *International Journal of System Assurance Engineering and Management*, *12*(4), 801–812. https://doi.org/10.1007/s13198-021-01103-0

Reynolds, J. K., & Francis, J. R. (2000). Does size matter? The influence of large clients on office-level auditor reporting decisions. *Journal of Accounting and Economics*, *30*(3), 375-400. https://doi.org/10.1016/S0165-4101(01)00010-6

Safari Gerayli, M., Rezaei Pitenoei, Y., & Abdollahi, A. (2021). Do audit committee characteristics improve financial reporting quality in emerging markets? Evidence from Iran. *Asian Review of Accounting*, *29*(2), 251–267. https://doi.org/10.1108/ARA-10-2020-0155

Salehi, M., Lari Dasht Bayaz, M., Mohammadi, S., Adibian, M. S., & Fahimifard, S. H. (2020). Auditors' response to readability of financial statement notes. *Asian Review of Accounting*, *28*(3), 463–480. https://doi.org/10.1108/ARA-03-2019-0066

Seifzadeh, M., Salehi, M., Abedini, B., & Ranjbar, M. H. (2021). The relationship between management characteristics and financial statement readability. *EuroMed Journal of Business*, *16*(1), 108-126. https://doi.org/10.1108/EMJB-12-2019-0146

Tetlock, P. C., Saar-Tsechansky, M., & Macskassy, S. (2008). More than words: Quantifying language to measure firms' fundamentals. *Journal of Finance*, *63*(3), 1437–1467. https://doi.org/10.1111/j.1540-6261.2008.01362.x

Theodoraki, C., Messeghem, K., & Rice, M. P. (2018). A social capital approach to the development of sustainable entrepreneurial ecosystems: An explorative study. *Small Business Economics*, *51*(1), 153–170. https://doi.org/10.1007/s11187-017-9924-0

Wan Ismail, W. A., Kamarudin, K. A., & Sarman, S. R. (2015). The quality of earnings in Shariah-compliant companies: Evidence from Malaysia. *Journal of Islamic Accounting and Business Research*, *6*(1), 19–41. https://doi.org/10.1108/JIABR-03-2013-0005

Wang, L., Chen, X., Li, X., & Tian, G. (2021). MD&A readability, auditor characteristics, and audit fees. *Accounting & Finance*, *61*(4), 5025-5050. https://doi.org/10.1111/acfi.12748

Xu, H., Pham, T. H., & Dao, M. (2020). Annual report readability and trade credit. *Review of Accounting and Finance*, *19*(3), 363-385. https://doi.org/10.1108/RAF-10-2019-0221

Xu, Q., Fernando, G., Tam, K., & Zhang, W. (2020). Financial report readability and audit fees: A simultaneous equation approach. *Managerial Auditing Journal*, *35*(3), 345-372. https://doi.org/10.1108/MAJ-02-2019-2177

Yoga Pratama, B., Putu Dian Rosalina Handayani Narsa, N., & Pranetha Prananjaya, K. (2022). Tax avoidance and the readability of financial statements: Empirical evidence from Indonesia. *Journal of Asian Finance*, *9*(2), 103–0112. https://doi.org/10.13106/jafeb.2022.vol9.no2.0103