

The impact of it governance on audit outcomes and footnote readability for public companies in Indonesia

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ABSTRACT

This study explores the relationship between IT governance and audit outcomes, including audit costs, quality, report lag, opinions, and the readability of financial statement footnotes in Indonesian public companies. Utilizing regression analysis, the research finds that while IT governance does not significantly affect audit costs, report lag, or opinions, it positively influences audit quality. Contrary to expectations, higher IT capabilities do not lead to increased audit costs but reduce them by lowering audit efforts. Furthermore, IT governance does not notably impact footnote readability, potentially due to information overload in annual reports. These findings shed light on the importance of IT governance in shaping audit quality and provide valuable insights for stakeholders in Indonesian public companies. Further research is encouraged to explore these relationships in different contexts and industries.

Introduction

The advancement of technology brings a series of new lifestyles in this era of globalization with just one click. This phenomenon is called "IT for everyone," a new type of consumer trust in information technology, highlighting democratic access and individual use of information technology (Gregory et al., 2018). This phenomenon makes information technology increasingly important in company operations, prompting companies to proactively control and monitor their information technology performance (Havelka & Merhout, 2013). Competitive advantages can be ensured when companies realize the importance of controlling and supervising information technology. However, it can also lead to significant losses because operational control in businesses that implement information technology has become commonplace. Companies need to adjust to improve the competence of the IT board as it can ensure the effectiveness of the company's IT, providing support from intangible assets, namely IT board competence (Benaroch & Chernobai, 2017).

Information technology has become an investment trend in the era of globalization (Lunardi et al., 2014). Some previous research has demonstrated that applied information technology can reduce costs and strengthen a company's internal controls, especially when supported by IT governance boards. Effective IT governance support ensures that all internal and external information is stored in a large database (Anthony Jr, 2018). Company decision-making becomes more efficient and effective, ultimately affecting its performance, as indicated by Tallon et al. (2013), who stated, "With good IT governance, company profitability can be improved over time through high management participation in IT implementation." Senior management involvement is necessary to ensure the implementation of an IT governance framework that provides a good structure, process, and relational mechanism for efficient decision-making and IT monitoring (Joshi et al., 2018). This framework provides guidance in selecting and applying suitable IT governance for a company (Batyashe & Iyamu, 2017). COBIT is one example of an IT Governance framework commonly used by companies to ensure greater transparency and accountability by enhancing external reporting to stakeholders (Joshi et al., 2018).

The author's intention is to find the relationship between IT Governance and audit outcomes and footnotes. According to Lowe et al. (2017), the development of information technology, along with a good IT Governance framework, encourages audit companies to improve audit quality, effectiveness, and efficiency. Because information is a key aspect of auditing, information technology provides a better system for collecting all integrated business process information within a large database, enabling auditors to increase control risk, inherent risk, and detection risk (Askary et al., 2012). This leads to higher audit quality, lower audit risk, and lower audit costs (Mazza

& Azzali, 2018). However, there is a difference in Hoffman's statement, which suggests, "For companies using superior information technology, they will incur higher audit costs in line with their IT capabilities, requiring specialists in their audits" (Hoffman et al., 2018). This discrepancy raises an interesting research gap, leading to an analysis of which statement is more applicable in Indonesia.

The concept of IT governance makes information in companies more transparent, controlled, and monitored regularly (Prasad et al., 2012). This also raises the question of whether this condition minimizes audit report delays because integrated information makes it easier for auditors to find and gather business information for auditing purposes. This research also aims to analyze the impact of IT governance on the readability of financial statement footnotes. Annual reports contain a lot of information about a company's reporting framework (Abernathy et al., 2018), but they do not sufficiently explain complex company information. Previous research has shown that investors also use textual information found in annual reports, such as the president's letter, management's discussion and analysis (MD&A), and footnotes, not just accounting numbers (Courtis, 1995; Jones & Shoemaker, 1994; Lee & Tweedie, 1975). The increased disclosure required by companies for external users raises concerns about communication effectiveness (Lehavy et al., 2011). Therefore, the availability of footnotes is essential to summarize all important company information without overwhelming it, serving as a bridge between users or readers and the company. Integrated information from information technology facilitates access to more comprehensive information, so footnote readability will have a high index because this information can be easily conveyed.

The primary objective of this study is to assess the impact of IT Governance on audit outcomes and footnote readability, aiming to address significant gaps in existing research literature. Specifically, it seeks to reconcile the divergent findings presented by Mazza and Azzali (2018) and Hoffman (2018) regarding the relationship between IT quality and audit costs. While Mazza and Azzali argue for reduced audit costs with higher IT quality due to enhanced monitoring and control, Hoffman suggests a contrary trend, positing that advanced IT capabilities lead to increased audit costs, necessitating specialized audit expertise (Hoffman et al., 2018). This discrepancy underscores the need for a comprehensive investigation into the underlying factors contributing to such disparate conclusions.

Furthermore, this study endeavors to explore the less-explored association between IT governance and various audit outcomes, including audit quality, report delays, and audit opinions. Additionally, it aims to shed light on the relatively novel area of footnote readability in the context of IT governance. Drawing from Abernathy's (2018) work on financial statement footnote readability and audit outcomes, this research seeks to contribute to a deeper understanding of the interplay between IT governance practices and financial reporting transparency. By addressing these research gaps, the study aspires to provide valuable insights for both academic inquiry and practical application in the domain of corporate governance and audit practices.

The structure of this research paper: Part 1, the introduction, explains the background of the problem that has led to research gaps, the research objectives, followed by a summary of the research methodology and results, and finally, the research contribution and the last part is the structure of this research paper. Part 2 discusses the literature review and the presentation of previous research for each topic: IT Governance, Audit Costs, Audit Quality, Audit Report Lag, Audit Opinions, and Footnote Readability. It is followed by how hypotheses are developed, along with hypotheses for each topic. Part 3 provides further details on the methodology used in this research, as well as the interpretation of variable definitions, a description of the research sample, and an analysis description. Part 4 discusses the research results from descriptive and linear regression analysis methods that address the research questions. Finally, it concludes the research findings, limitations, and recommendations for future research and practitioners.

Literature Review

Grand Theories

Information Technology Governance

The term Information Technology (IT) governance was introduced in the early 1990s by Henderson and Venkatraman (1993). They defined IT governance as the alignment of business strategy with IT. Since then, the concept of IT governance has evolved gradually, providing a structure, processes, and relational mechanisms for managing technology (De Haes & Van Grembergen, 2009; Peterson, 2004; Willson & Pollard, 2009). The sustainability and expansion of an organization's IT depend on IT governance (ITGI, 2003, p. 10), which serves as a framework to ensure a specific role for decision-making rights and accountability in IT (Weill & Ross, 2004). Another definition of IT governance, from the research of Webb et al. (2006), is the strategic alignment of business and IT to achieve maximum business value through effective control and accountability of IT with its development and maintenance. In essence, IT governance is an organizational structure and process that ensures that a company's IT supports and extends the company's strategy and objectives. IT governance is important for companies for two main reasons. Firstly, in a more complex and competitive business environment, IT is needed to improve company

efficiency and maintain competitive advantage (Mata et al., 1995) while enhancing the company's value (Weill & Ross, 2004). Secondly, company decisions on various IT-related topics, such as IT investments, IT principles, and IT infrastructure management, can be made more efficiently with IT governance in place, allowing companies to make decisions more quickly and accurately (Sambamurthy & Zmud, 1999; Weill & Ross, 2004; L. Xue et al., 2011; Y. Xue et al., 2008).

Audit Outcomes

In the context of auditing, the findings resulting from an audit are referred to as audit outcomes (Jones & Chen, 2005). The ultimate outcome of an audit is the audit report, and its accuracy can be verified ex-post (Antle & Nalebuff, 1991). This includes the informativeness of the audit report, the auditor's opinion on the effectiveness of the client company's internal controls over financial reporting, and whether the client adheres to generally accepted accounting principles. Indirect audit outcomes comprise audit quality, as audits restrict earnings management (Becker et al., 1998), and audit report lag, which is the delay in issuing the audited annual report to the public, the time interval between the client's fiscal year-end and the date of the audit report (Newton & Ashton, 1989). Francis (2011) stated that auditor characteristics, specific engagement characteristics, client characteristics, and institutions are some factors that affect audit outcomes. Auditor characteristics include the size of the auditing firm, brand name, industry expertise, and location/analytical unit. Auditor independence, fees for services, and engagement tenure are included in specific engagement characteristics. Client characteristics encompass the company's size, information environment, corporate governance (e.g., audit committee), and regulatory factors, and investor protection falls under institutional factors (Francis & Krishnan, 1999).

Readability of Footnotes

Financial reports that are not informative regarding financial disclosures or footnotes can lead to a phenomenon known as "information overload," where financial report users cannot find the most relevant information due to excessive disclosures. This concern arises because a lack of readability in financial reports can disrupt their usefulness to users (Lehavy et al., 2011; Li, 2008; You & Zhang, 2009). Recently, the Securities and Exchange Commission (SEC) has taken significant steps to ensure that financial disclosures are more readable and efficient in providing an understanding of the company to financial report users (Francis, 2014). The focus on improving the readability of footnotes coincides with the emergence of auditing reporting standards that state that audits should cover the essentials of the financial report, accounting policy disclosures, footnotes to the financial statements, and schedules and explanations. Therefore, footnotes are included in the audit engagement. Furthermore, footnote information will provide stock prices to financial report users, eliminating doubts when investing (De Franco et al., 2011). In addition to the SEC, the Financial Accounting Standards Board (FASB 2014) has issued an exposure draft to make footnote disclosures more effective and less excessive.

Hypothesis Development

As technology's significance continues to rise, companies worldwide are investing heavily in IT endeavors to gain competitive advantages (Leliveld & Jeffrey, 2004). However, this pursuit is often fraught with challenges, as evidenced by the high rates of IT project delays, budget overruns, and functional deficiencies (Maizlish & Handler, 2015). Despite recognizing the importance of IT investment, corporate executives are wary of overspending on IT deployment and operations (Marchand, 2005). This dual perception of IT as both a potential asset and a risk factor underscores the relevance of agency theory, proposed by Jensen and Meckling (1976). Within this framework, the principal-agent relationship emerges, wherein executives entrust IT management to agents, introducing agency problems as they seek efficient IT deployment to maximize returns while mitigating risks. Consequently, IT governance has emerged to address these challenges, aiming to align principal and agent interests, control IT investments, and ensure operational efficiency (De Haes & Van Grembergen, 2008). Effective IT governance not only enhances company performance by aligning IT investments with organizational objectives (Jacobson, 2009) but also plays a pivotal role in influencing audit outcomes and footnote readability (Veerankutty, 2018; Iliescu, 2010; Abernathy, 2018). However, gaps remain in understanding the relationship between board-level IT governance and financial results (Lai, 2022).

IT governance and audit fees

IT governance leads to a positive relationship between effort and the ability to leverage information technology as an asset (Prasad et al., 2012) to enhance the quality, effectiveness, and efficiency of corporate audits (Lowe et al., 2017). This means that IT can bring substantial positive benefits if it can be executed effectively, controlled, and periodically monitored by specialized management. IT governance ensures that IT operates effectively and that all company employees can operate IT systems well. Well-integrated IT generates high-quality information about the

company, such as financial reports, annual reports, or sustainability reports. In their audits, auditors evaluate all of the company's financial activities, including financial statements, annual reports, or sustainability reports, to determine if they have been fairly presented and conform to generally accepted accounting principles. Integrated information makes audits more effective and efficient by facilitating access to information from the database (Bierstaker et al., 2001). IT has impacted audit planning, audit testing, and audit documentation. The implementation of productive IT governance allows managers to focus on using IT to integrate, align, and connect company processes, improving information flow and enhancing understanding of the key aspects of the control environment (Rubino et al., 2017), thus reducing control risk for auditors. Auditors can set low control risks because they believe that the company's controls are good, and detection risk and inherent risk can also be lower (Askary et al., 2012). However, high-level IT capabilities will also result in higher audit costs as specialized auditors are required to operate IT systems for auditing the company (Hoffman et al., 2018). This aligns with the audit engagement risk theory, which consists of three components, one of which is client business risk (Johnstone & Bedard, 2003). This belief leads to the hypothesis:

H1: Companies with effective IT governance will lead to higher audit costs.

IT Governance and Audit Quality

IT governance integrates information into a single comprehensive database, making it easier for auditors to access all the information from the database and search for it easily. The implementation of effective IT governance enables managers to focus on using IT to integrate, align, and connect company processes, enhancing information flow and understanding of the control environment (Rubino et al., 2017) and reducing control risk for auditors. Auditors can set low control risks because they believe that the company's controls are good. In addition to control risk, detection risk and inherent risk can also be lower (Askary et al., 2012), resulting in higher audit quality. Alignment with low audit risk means that auditors are confident that they can demonstrate that the company's financial statements have been fairly presented and comply with the applicable accounting standards, especially if they are one of the big four public accountants. Although this may prolong the audit because auditors need to gather evidence to demonstrate this quality, with information technology, auditors can positively detect fraud, ultimately leading to higher audit quality (Askary et al., 2012).

H2: Companies with effective IT governance will result in high audit quality.

IT Governance and Audit Report Lag

Another essential aspect of audit outcomes is the audit report lag, which is the period between the end of a company's fiscal year and the date of the audit report (Newton & Ashton, 1989). This relates to the delay in issuing audited annual reports, which impacts one of the characteristics of financial reporting, namely timeliness. Timeliness is connected to the availability of information for use by stakeholders before it loses its capacity to influence a decision (Board, 1980). Therefore, it's crucial to keep the audit period as short as possible while still being accurate (Givoly & Palmon, 1982). Decisions are more valuable when based on relevant audited financial reports, and a longer audit duration reduces the information's relevance. Clients and auditors collaborate to produce audited financial reports that remain relevant and accurate (Antle & Nalebuff, 1991). Effective IT governance, monitored periodically, accelerates the flow of information and integration within a company, making it easier for auditors to obtain information and shortening the audit period. This belief leads to the hypothesis:

H3: Companies with effective IT governance will result in a shorter audit report lag.

IT Governance and Audit Opinion

Another critical topic in audit outcomes is the audit opinion. An auditor can build or destroy their reputation solely by providing an audit opinion, which reflects an independent verification of a company's financial reporting. To formulate an audit opinion, auditors need to spend a considerable amount of time because it involves detailed and complex procedures. This includes assessing the client's business, assessing their risks, performing tests of internal controls, substantive testing of transactions, substantive testing of account balances, and analytical procedures to obtain substantive evidence regarding management's assertions, ultimately producing results (Felix Jr & Kinney Jr, 1982; Habib & Bhuiyan, 2018). With all the integrated and periodically monitored information, the risks to their audits are reduced, making information collection easy and ensuring high accuracy, which, in turn, results in higher audit quality. This belief leads to the hypothesis:

H4: Companies with effective IT governance will lead to higher audit opinions (Unqualified Opinions).

IT Governance and Footnote Readability

IT can bring value to a company if managed effectively, causing a company to grow and become more complex in terms of its size (Deloitte, 2015b). This complexity doesn't help the public invest because of the difficulty in

understanding information about the company's business. To address this issue, companies need to create well-documented financial footnotes containing essential information about the company's performance, structure, or activities over the year. This information comes from the company itself, its financial reports, and data within the company's database. Information technology is used to integrate all this data so that the company can easily find the required information and meet all the financial reporting requirements set by the SEC. According to Askary (2012), effective IT governance can reduce client risk, including control risk, inherent risk, and detection risk. This happens because IT effectively integrates all company information and creates a collaborative organizational structure (Prasad et al., 2012). This belief leads to the hypothesis:

H5: Effective IT governance will lead to a higher financial footnote readability index.

Research Method

In a quantitative study, the author structured the research based on the characteristics of issues related to the background and current conditions of the objects under investigation. The sample used came from publicly traded companies listed on the Indonesia Stock Exchange (IDX) from 2013 to 2018, excluding banks, due to their different audit and financial criteria. The year 2013 was chosen as the starting point for the IT governance phenomenon's significant growth in Indonesia, as evidenced by the Indonesian military's increasing use of IT to support their operations. Concurrently, the Indonesian government began utilizing IT by creating an e-government system. Secondary data was obtained from Indonesia Stock Exchange documents, including annual reports from companies in the period 2013 to 2018. Data analysis employed linear regression analysis techniques to determine the significance of the research hypotheses.

In this study, the author investigates audit outcomes, including audit fee, audit quality, audit report lag, and audit opinion, along with footnote readability, as dependent variables. Drawing from previous research by Joshi (2018), the study focuses on two scopes to assess good IT governance: IT Strategic Alignment (ITSA) and IT Value Delivery (ITVD). ITSA evaluates factors like the presence of a CIO on the board and the availability of IT committees, while ITVD examines aspects such as the mention of IT as a strategic business issue and the implementation of IT governance frameworks like COBIT and ITIL. Scores are assigned based on the presence of these factors, with the mean of IT Governance derived from the average scores of ITSA and ITVD for analysis purposes.

The dependent variables to be used in the study are audit fees, audit quality, audit report lag, and audit opinion. Audit fees represent the amount paid to auditor firms for services rendered. Audit quality is assessed based on whether the auditor is from one of the big four public accountant firms (PwC, KPMG, Deloitte, EY). Audit report lag is measured as the number of days between the client's fiscal year-end and the audit report date. Audit opinion is determined by the auditor's assessment of the company's financial statements, with an unqualified opinion scoring 1.

As for footnotes' readability, inspired by Abernathy et al. (2018), the study employs a readability index derived from the length of footnotes. This index called the Flesch-Kincaid Grade Level, assigns a grade level between 0 and 100 based on factors like sentence length and word complexity. Higher scores indicate easier readability and are suitable for a wider audience, while lower scores suggest greater complexity, potentially requiring a higher level of education to comprehend. This index classification spans seven levels, with higher scores indicating broader accessibility, as seen in previous research by Curtis (1995). For instance, a score of 50.00 is typical for Wikipedia users, while 70.00 is common for Times Magazine readers. Thus, higher scores imply greater accessibility and ease of understanding, making the information more widely usable. This study will incorporate a commonly used set of control variables from the audit outcomes literature. These include variables such as the presence of Big 4 auditors (BIG4), Audit Fee, firm size (SIZE), growth (GROWTH), age (AGE), leverage (LEVERAGE), return on assets (ROA), current assets (CURR), inventory receivables (INVREC), engagement change, industry, year, audit report lag (ARL), and auditor opinion (AO) (Habib & Bhuiyan, 2018). For footnote readability, the common set of control variables in previous research comprises Firm Size, Growth, Age, and Board Size, which contribute to firm complexity, as well as Leverage, Loss, and IYI for firms' performance (Abernathy et al., 2018; Karim & Sarkar, 2019). Further details on these variables can be found in Table 1.

Table 1. Variable Definition

Variable	Definition	Measurement	Data Source
<i>Independent Variable</i>			
ITG	An organizational structure and processes that ensure that the company IT sustains and extends the strategies and objectives of the company.	The average score for all items of good IT Governance.	Annual Report

Variable	Definition	Measurement	Data Source
<i>Independent Variable</i>			
ITSA	IT strategy, business strategy, IT structure, business structure fit and integration.	The average score for IT strategic alignment category items.	Annual Report
ITVD	The optimization of IT expenses and providing IT products and services on time, within budget, and with appropriate quality.	The average score for IT value delivery category items.	Annual Report
<i>Dependent Variables</i>			
AFEE	Audit Fee is charged to the company by the audit firms.	The natural logarithm (<i>ln</i>) of the audit fee.	Annual Report, Financial Report
AQ	Audit quality results from the audit by using the public accountant firms' rank, whether it is the Big Four or not.	The proxy is whether the audit firm is one of the big 4 or not. If yes, then the score will be 1.	Annual Report.
ARL	Audit Report Lag is the number of days between the client's fiscal year-end and the audit report date.	The number of days from the audit report date and client's fiscal year-end.	Financial Report, Annual Report, Audit Report.
AO	Auditor Opinion for the company financial statements, if the opinion is unqualified, then the score is 1.	If the opinion is unqualified, then the score is 1. If the opinion is not unqualified, then the score is 0.	Auditor's Opinion.
FR	Footnote Readability is going to be measured by using the Flesch-Kincaid Grade Level, which comes from the length of financial footnotes.	Natural logarithm (<i>ln</i>) of Flesch-Kincaid Grade level.	Footnote.
<i>Control Variables</i>			
FSIZE	Firm size.	The natural log of total assets (<i>ln</i>).	Financial Report.
GROWTH	Growth Rate.	Present value minus past value and divided by past value.	Financial Report.
LEV	Financial leverage.	Long-term debt plus debt in current liabilities divided by total assets.	Financial Report.
ROA	Return on assets.	Net income divided by average total assets.	Financial Report.
CURR	Current ratio.	Current assets are divided by current liabilities.	Financial Report.
INVREC	Inventory Receivable.	Total Inventories plus receivables divided by total assets.	Financial Report.
AGE	Firm age	The company age since they were founded.	Footnote.
BSIZE	Board Size.	Total number of board members.	Annual Report Financial Report, Footnote.
IYI	Industry and year.	The industry and the year of the company.	Annual Report, Financial Report.
AUDCHNG	Audit change.	If there is an auditor change during the fiscal year, the score is 1 and zero; otherwise, the score is zero.	Annual Report.
AUDTNR	Audit tenure	The number of years the company use the audit firm.	Annual Report.

To test the hypotheses, the author has developed several regression models to analyze the relationships between variables.

$$AFEE = \beta_0 + \beta_1ITG + \beta_2FSIZE + \beta_3GROWTH + \beta_4LEV + \beta_5ROA + \beta_6CURR + \beta_7INVREC + \beta_8IYI + \beta_9ARL + \beta_{10}AUDCHNG + \beta_{11}AUDTNR + \varepsilon \quad (1)$$

This model tests the relationship between audit fees and IT governance, controlling for financial characteristics and audit engagement factors like firm size, growth, leverage, return on assets, current ratio, inventory receivable, audit report lag, audit change, and audit tenure.

$$AQ = \beta_0 + \beta_1ITG + \beta_2FSIZE + \beta_3GROWTH + \beta_4LEV + \beta_5CURR + \beta_6IYI + \beta_7AFEE + \beta_8ARL + \beta_9AUDCHNG + \beta_{10}AUDTNR + \varepsilon \quad (2)$$

This model examines the relationship between audit quality and IT governance, considering firm size, growth, leverage, current ratio, inventory receivable, audit fee, audit report lag, audit change, and audit tenure.

$$ARL = \beta_0 + \beta_1ITG + \beta_2FSIZE + \beta_3GROWTH + \beta_4LEV + \beta_5ROA + \beta_6AGE + \beta_7CURR + \beta_8IYI + \beta_9AFEE + \beta_{10}AUDCHNG + \beta_{11}AUDTNR + \beta_{12}AO + \varepsilon \quad (3)$$

This model investigates the relationship between audit report lag and IT governance, controlling for financial characteristics and audit engagement factors such as firm size, growth, leverage, return on assets, age, current ratio, inventory receivable, audit fee, audit change, audit tenure, and audit opinions.

$$AO = \beta_0 + \beta_1ITG + \beta_2FSIZE + \beta_3GROWTH + \beta_4LEV + \beta_5AGE + \beta_6IYI + \beta_7AFEE + \beta_8AUDCHNG + \beta_9AUDTNR + \beta_{10}ARL + \varepsilon \quad (4)$$

This model assesses the relationship between audit opinion and IT governance, considering firm size, growth, leverage, age, inventory receivable, audit fee, audit change, audit tenure, and audit report lag.

$$FR = \beta_0 + \beta_1ITG + \beta_2FSIZE + \beta_3GROWTH + \beta_4LEV + \beta_5AGE + \beta_6ROA + \beta_7CURR + \beta_8INVREC + \beta_9BSIZE + \beta_{10}IYI + \varepsilon \quad (5)$$

This model examines the relationship between financial reporting and IT governance, considering firm size, growth, age, board size, leverage, return on assets, current ratio, inventory receivable, and inventory yield index.

Result and Discussion

Descriptive Statistics

The descriptive statistics reveal several key insights about the variables of interest. IT Governance (ITG) shows a relatively low mean of 0.0363, suggesting that IT governance practices may not be extensively implemented across the sampled companies. Audit Opinion (AO) exhibits a high mean of 0.895, indicating that the majority of companies received an unqualified audit opinion. Audit Report Lag (ARL) displays a mean of 82.14 days, reflecting the average delay between the fiscal year-end and the issuance of the audit report. Audit Quality (AQ) and Audit Fee (AFEE) present challenges for interpretation due to their large mean values, indicating substantial variability that warrants further investigation. Financial Reporting (FR) demonstrates a mean of 1,539, suggesting variability in financial reporting practices across the sampled companies. These statistics underscore the diverse landscape of audit outcomes and financial practices within the dataset, highlighting areas for potential analysis and scrutiny.

Table 2. Descriptive Statistics

VARIABLES	MEAN	Std. Dev.	MIN	MAX
ITG	0.0363	0.122	0	0.800
AO	0.895	0.306	0	1
ARL	82.14	37.82	7	1,024
AQ	0.294	0.456	0	1
AFEE	1.533e+09	3.483e+09	14,617	4.925e+10
FR	1,539	17,752	13.75	222,347
AGE	14.86	8.971	1	41
FSIZE	19.71	3.680	5.069	26.57
GROWTH	798.0	18,636	-16.94	883,856
LEV	0.604	1.112	0.000242	22.61
ROA	2.533	11.33	-94.58	92.10
CURR	5.804	59.12	0.000160	2,726
INVREC	0.266	0.201	0.000158	0.924
IYI	2,016	1.730	2,013	2,018
BSIZE	8.691	3.222	2	28

Regression Results

IT governance and audit fee

Table 3 presents the primary regression results for testing H1, examining the relationship between IT governance (ITG) and audit fees (AFEE). The analysis reveals a positive coefficient, albeit statistically insignificant, with a probability ($P>t$) of 0.947. This indicates that the relationship between IT governance and audit fees lacks statistical significance. Consequently, hypothesis 1 is rejected, suggesting that IT governance does not play a significant role in influencing audit fees in the studied context. The findings imply that the presence or absence of robust IT governance support does not significantly impact audit fees; they may remain unchanged or even decrease. This contradicts the expectation that effective IT governance would lead to higher audit fees. Contrary to the hypothesis, it appears that despite improved information flow control and regular monitoring facilitated by IT governance, auditors may not perceive a need to increase fees substantially, continuing with their standard procedures. This outcome aligns more closely with the findings of Mazza and Azali (2018) for Indonesian public companies, who observed lower audit fees associated with higher IT quality due to reduced control risk and audit effort. Hoffman's (2018) assertion that high IT quality would lead to higher audit fees does not seem applicable in the Indonesian context, as evidenced by the results.

Table 3. Audit Fee Regression Analysis

AFEE	Coef.	Std. Err.	t	P>t	95% Conf.	Interval
ITG	0.5021083	0.4747099	1.06	0.290	-0.4296798	1.433896
FSIZE	0.1458254	0.0186829	7.81	0.000	0.1091536	0.1824972
GROWTH	-0.0000302	0.0000306	-0.99	0.324	-0.0000903	0.0000299
LEV	0.0974611	0.1847327	0.53	0.598	-0.2651429	0.460065
ROA	0.0070652	0.0083245	0.85	0.396	-0.0092746	0.023405
CURR	-0.003355	0.0044635	-0.75	0.452	-0.0121162	0.0054061
INVREC	-0.414929	0.397426	-1.04	0.297	-1.19502	0.3651618
IYI	0.2422995	0.0677614	3.58	0.000	0.1092935	0.3753055
AUDCHNG	-0.4696705	0.2851358	-1.65	0.100	-1.029351	0.0900104
AUDTENURE	0.0081087	0.0712655	0.11	0.909	-0.1317752	0.1479927
ARL	-0.0042266	0.0036731	-1.15	0.250	-0.0114364	0.0029833
_cons	-470.6695	136.422	-3.45	0.001	-738.447	-202.8921

IT governance and audit quality

Table 4 presents the primary regression results for testing H2, examining the relationship between IT governance (ITG) and audit quality (AQ). The analysis reveals a positive and statistically significant coefficient for ITG (0.2182997), with a p-value of less than 0.05 ($p=0.028$). This indicates a significant relationship between the two variables, supporting hypothesis 2. The findings suggest that companies with robust IT governance tend to have higher audit quality. Effective IT governance facilitates accurate information monitoring and enhances the qualitative characteristics of information, ensuring faithful representation. This regular monitoring by company boards contributes to smoother IT operations, ultimately improving audit quality. These results are consistent with previous research by Mazza and Azzali (2018), who observed a positive relationship between lower audit fees and higher audit quality due to enhanced IT control over information flow, reduced control risk, and audit effort. Overall, the findings support the notion that strong IT governance positively influences audit quality, aligning with theoretical expectations.

Table 4. Audit Quality Regression Analysis

BIG4	Coef.	Std. Err.	t	P>t	95% Conf.	Interval
ITG	0.2182997	0.0993095	2.20	0.028	0.0233995	0.4131999
FSIZE	-0.018527	0.003814	-4.86	0.000	-0.0260124	-0.0110418
GROWTH	-4.69e-06	6.42e-06	-0.73	0.466	-0.0000173	7.92e-06
LEV	-0.0413443	0.0271363	-1.52	0.128	-0.0946008	0.0119121
CURR	-0.0016172	0.000931	-1.74	0.083	-0.0034444	0.00021
IYI	-0.0526043	0.0135232	-3.89	0.000	-0.0791443	-0.0260643
AFEE	3.18e-11	4.20e-12	7.58	0.000	2.36e-11	4.01e-11
AUDCHNG	-0.102238	0.0548235	-1.86	0.063	-0.209832	0.0053561
AUDTENURE	0.0616573	0.0142973	4.31	0.000	0.0335982	0.0897165
ARL	-0.0013204	0.0005982	-2.21	0.028	-0.0024945	-0.0001463
_cons	106.735	27.22452	3.92	0.000	53.3054	60.1646

IT governance and audit report lag

Table 5 presents the primary regression results for testing H3, investigating the relationship between IT governance and audit report lag (ARL). The analysis reveals a statistically significant relationship ($p < 0.01$) with a probability of 0.000. However, the coefficient for IT governance is negative (-34.37), indicating that despite the significance, IT governance does not lead to a shorter audit report lag. Consequently, hypothesis 3 is rejected. This finding contradicts the expectation that effective IT governance would streamline the flow of information and reduce audit report lag. Instead, the negative coefficient suggests that IT governance actually prolongs the audit report lag. This aligns with Abernathy's (2018) notion that while IT governance enhances information integration, it also introduces complexity, leading to longer audit durations due to information overload. Thus, the appearance of robust IT governance may increase the workload for auditors, requiring more time to evaluate the abundance of information, even potentially necessitating specialized IT skills. Overall, the results indicate that while IT governance may improve information integration, it may inadvertently extend audit report lag due to increased complexity, contradicting theoretical expectations.

Table 5. Audit Report Lag Regression Analysis

ARL	Coef.	Std. Err.	t	P>t	95% Conf.	Interval
ITG	-34.37308	5.293572	-6.49	0.000	-44.76288	-23.98328
FSIZE	-0.4608566	0.2071937	-2.22	0.026	-0.8675197	-0.0541934
GROWTH	0.0002809	0.0003551	0.79	0.429	-0.000416	0.0009779
LEV	10.32421	1.524759	6.77	0.000	7.331531	13.31688
ROA	-0.5396019	0.0864136	-6.24	0.000	-0.7092075	-0.3699962
AGE	0.1037794	0.0984095	1.05	0.292	-0.08937088	0.2969296
CURR	0.0332756	0.04988	0.67	0.505	-0.0646386	0.1311897
IYI	0.6016367	0.7585827	0.79	0.428	-0.8872486	2.090522
AFEE	3.63e-10	2.26e-10	1.61	0.109	-8.04e-11	8.06e-10
AUDCHNG	2.608441	3.109634	0.84	0.402	-3.494899	8.711781
AUDTENURE	0.3624027	0.8165037	0.44	0.657	-1.240165	1.964971
AO	-25.63546	7.693108	-3.33	0.001	-40.73487	-10.53604
_cons	-1105.222	1527.097	-0.72	0.469	-4102.485	1892.041

IT governance and audit opinion

Table 6 presents the primary regression results for testing H4, exploring the relationship between IT governance (ITG) and audit opinion (AO). The analysis reveals a negative coefficient for ITG (-0.008402), which is statistically insignificant with a probability of 0.734. This indicates that the relationship between IT governance and audit opinion lacks significance, leading to the rejection of hypothesis 4. Despite the anticipated improvement in audit quality due to enhanced information integration and accuracy facilitated by IT governance, it does not appear to influence auditor assessments of internal information significantly. While IT governance may reduce control risk and enhance information quality, other factors such as client independence, scope limitation due to technology, and adherence to accounting principles also influence audit opinion. Consequently, the presence of robust IT governance does not significantly impact audit opinion, highlighting the multifaceted nature of factors affecting auditor assessments. Overall, the results suggest that while IT governance may enhance audit quality, it does not necessarily translate into significant changes in audit opinion.

Table 6. Audit Opinion Regression Analysis

AO	Coef.	Std. Err.	t	P>t	95% Conf.	Interval
ITG	-0.008402	0.0247176	-0.34	0.730q	-0.0569121	0.040108
FSIZE	0.0002727	0.0009464	0.29	0.773	-0.0015848	0.0021301
GROWTH	4.75e-07	1.64e-06	0.29	0.773	-2.75e-06	0.70e-06
LEV	-0.068539	0.006699	-10.23	0.000	-0.0816861	-0.0553918
AGE	0.0003424	0.0004441	0.77	0.441	-0.0005292	0.001214
IYI	0.0016197	0.0034334	0.4	0.637	-0.0051186	0.008358
AFEE	-3.55e-13	1.04e-12	-0.34	0.734	-2.40e-12	1.69e-12
AUDCHNG	-0.0336751	0.0136929	-2.46	0.014	-0.0605484	-0.0068018
AUDTENURE	0.0007419	0.0036986	0.20	0.841	-0.0065167	0.0080006
ARL	-0.0008158	0.0001483	-5.50	0.000	-0.0011067	-0.0005248
_cons	-2.18726	6.912138	-0.32	0.752	-15.75281	11.37829

IT governance and footnote readability

Table 7 presents the primary regression results for testing H5, investigating the relationship between IT governance (ITG) and footnote readability index (FKR_IND). The analysis reveals a positive coefficient for ITG (+3533.133), but it is statistically insignificant with a probability of 0.220. Consequently, hypothesis 5 is rejected, indicating that IT governance does not lead to a higher footnote readability index. Despite the positive coefficient, the lack of significance suggests that IT governance does not have a significant impact on footnote readability. This finding suggests that while IT governance may influence the complexity and length of footnotes, it does not necessarily enhance readability. The complexity of information in footnotes, characterized by the use of technical language and repetitive sentences, may contribute to longer footnotes and decreased readability. Moreover, the limited ability of companies to customize language styles in conveying information may further hinder readability. Overall, the results suggest that although IT governance affects the content of footnotes, it does not significantly improve their readability, highlighting the challenges in effectively communicating complex information to readers.

Table 7. Footnote Readability Regression Analysis

FKR_IND	Coef.	Std. Err.	t	P>t	95% Conf.	Interval
ITG	0.1184608	0.1359736	0.87	0.384	-0.1482431	0.3851647
FSIZE	0.0017663	0.0048806	0.36	0.717	-0.0078067	0.0113393
GROWTH	4.74e-08	8.16e-07	0.06	0.954	-1.55e-06	1.65e-06
LEV	0.1500006	0.0225641	6.65	0.000	0.1057424	0.1942587
AGE	0.0038311	0.0021085	1.82	0.069	-0.0003046	0.0079667
ROA	0.0026653	0.0018597	1.43	0.152	-0.0009824	0.0063131
CURR	0.0007598	0.0011551	0.66	0.511	-0.0015059	0.0030255
INVREC	-0.073887	0.0966378	-0.76	0.445	-0.2634361	0.1156621
BSIZE	0.0008295	0.0059543	0.14	0.889	-0.0108494	0.0125085
IYI	0.0511602	0.0110976	4.61	0.000	0.029393	0.0729274
cons	-100.1806	22.36215	-4.48	0.000	-144.0426	-56.31857

Conclusion

The study aimed to investigate the relationship between IT governance and audit outcomes, as well as footnote readability. While prior literature emphasized the potential benefits of robust IT governance, particularly in enhancing decision-making efficiency and operational effectiveness, the findings of this study suggest nuanced insights. Despite the expectation that effective IT governance would lead to higher audit costs, shorter audit report lag, and improved audit opinion, the empirical analysis revealed contrasting results. Contrary to hypotheses 1, 3, and 4, which posited positive associations between IT governance and audit costs, audit report lag, and audit opinion, respectively, the study found no significant impacts. This discrepancy challenges prior expectations and highlights the complexity of the relationship between IT governance and traditional audit metrics in the Indonesian context. However, the study did find support for hypothesis 2, indicating a positive association between IT governance and audit quality. This aligns with existing literature suggesting that effective IT governance enhances information accuracy, facilitates access to data, and reduces control risks for auditors, ultimately leading to higher audit quality. Despite the lack of direct influence on traditional audit outcomes, the significant impact on audit quality underscores the importance of IT governance in ensuring the reliability and integrity of financial reporting processes.

Furthermore, the unexpected negative association between IT governance and the footnote readability index, as hypothesized in hypothesis 5, underscores the unintended consequences of information overload and complexity in annual reports. Despite the potential benefits of IT governance in streamlining information management, its implementation may inadvertently lead to more complex and less readable footnotes. This finding suggests a need for organizations to strike a balance between leveraging IT for enhanced information integration and ensuring the readability and accessibility of financial disclosures. In summary, while the study's findings deviate from prior expectations in certain aspects, they contribute valuable insights into the intricate relationship between IT governance, audit outcomes, and footnote readability. These insights underscore the need for further research to elucidate the contextual factors influencing the effectiveness of IT governance practices and their implications for audit processes and financial reporting.

This study faced limitations in sourcing primary references, particularly concerning footnote readability and IT Governance. Despite these challenges, the findings offer insights for future research and practice. Currently, IT governance doesn't significantly impact audit outcomes, such as costs, quality, or report delays. However, given technology's ongoing evolution, re-evaluating these relationships in 3-4 years is recommended. While no direct association has been found between IT governance and footnote readability, strategic information selection and

clearer language styles could improve readability in the future. Future research should explore moderating factors influencing IT Governance and audit outcomes, as well as strategies for enhancing footnote readability in evolving technological contexts.

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