Do audit attributes impact earnings quality? Evidence from India

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Abstract

Purpose – The present study's goal is to analyze the impact of audit quality (AQ) on earnings quality (EQ) using different audit attributes. The study shows empirical evidence from India, considered an emerging market.

Design/methodology/approach – The sample selected represents the 376 non-financial firms listed on the Bombay Stock Exchange (BSE). With a 20-year time frame, the authors used the absolute value of discretionary accruals (McNichols, 2002) (DA) as a proxy for EM, which is inversely related to EQ. The authors analyzed data using OLS, fixed effect (FE), 2SLS and Panel-IV estimators.

Findings – The authors found that most audit attributes positively affect EQ. In the Indian context, joint auditor (JA), auditor size (A_SIZE), auditor fee (A_FEE) and auditor tenure (A_TENURE) have a negative association with EM indicating high EQ. In contrast, auditor rotation (A_ROTATON) positively affects EM confirming low EQ.

Research limitations/implications – The present study uses Big-4 and its member firms as a proxy of auditor size (A_SIZE); instead, other bases may be taken for it, like the dominant audit firms in a particular industry in sample data, etc. The authors have started audit tenure from the base year, i.e. 2001, which may ignore the association of auditor and auditee just before 2001.

Practical implications – The study findings would enhance policymakers' willingness to prepare appropriate regulations regarding JAs and auditor rotation, which might improve financial market efficiency and reduce financial fraud among Indian corporates.

Originality/value – To the best of the authors' knowledge, this is the first study to incorporate "Joint Auditor" (JA) as a proxy for audit quality in the Indian context, which might significantly contribute to the literature.

Keywords Accruals, Earnings quality, Auditor size, Joint auditor, Audit fee, Auditor tenure, Auditor rotation, India

Paper type Research paper

1. Introduction

The truthfulness of financial statements is frequently contested because they were created by the organization's management, which agency theory claims are subject to manipulation.

JEL Classification — M4, G30, G32, G38

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Market competition and intense development have pushed managers to indulge in accounting manipulation activities, which dilute the purpose of financial statements and hide the accurate picture of corporates' financial performance and position (Abu Afifa *et al.*, 2021; Alzoubi, 2016). Allocation of firms' resources is harmed due to a lack of accurate financial information quality from reported accounting numbers (Awuye, 2022; Gaio and Raposo, 2011).

Reported earnings quality (EQ) is a multidimensional concept and can be measured and evaluated through various factors, including discretionary accruals (DA) quality, earnings smoothness, earnings predictability, earnings persistence, earnings timeliness and value relevance (Duarte *et al.*, 2022; Gaio and Raposo, 2011). Literature on EQ supports that most of the studies on EQ used DA as an inverse proxy which is related to earnings management (EM) practices.

The external audit also helps decrease information asymmetry and conflict of interest between stakeholders and managers (Alzoubi, 2016). As in the present time, several corporate financial frauds have disappointed various stakeholders and attracted the attention of policy-makers and researchers to multiple domains to highlight some unobservable facts and relationships that may be useful to control managerial EM practices. Further, such financial scandals also challenged the quality and independence of the external auditor (Abu Afifa *et al.*, 2021; Al-Hiyari *et al.*, 2022; Houqe *et al.*, 2017).

Contemporary high-profile (Big-4) audit firms failed to play their role sufficiently, which attracted all to their quality regarding audit work (Al-Hiyari *et al.*, 2022; Alzoubi, 2016; Awuye, 2022; Houqe *et al.*, 2017). Joint auditors (JAs) expand the reliability of financial reporting, reduce information asymmetry and lower the cost of capital (Barghathi *et al.*, 2020; Garcia-Blandon *et al.*, 2021). In India, as per section 139(3) of The Companies Act 2013, the external audit may be conducted by more than one auditor jointly. This provision is not mandatory at present, but the Institute of Chartered Accountants of India (ICAI), formed under the Chartered Accountants Act, 1949, has agreed on the proposal of joint audits for large Indian corporate initially (Srivats, 2022).

The present study has two significant contributions; first, we found studies (André *et al.*, 2016; Barghathi *et al.*, 2020; Garcia-Blandon *et al.*, 2021; Nurunnabi *et al.*, 2020; Ratzinger-Sakel *et al.*, 2013) on JAs related to developed economies like France, where joint audit is mandatory, and the USA and the UK, where there is no such compulsion; such studies are unsuitable for developing economies like India due to different economic structure. As per our knowledge, studies have not been done using a JA attribute for the Indian context; the present study attempts to fill this research gap. The second, auditor tenure, has been studied in international studies (Ghosh and Moon, 2005; Gul *et al.*, 2009; Lim and Tan, 2009; Manry *et al.*, 2008) but cannot be accepted in Indian legal and economic structures further recent studies conducted in the Indian context by (Jadiyappa *et al.*, 2021; Mohapatra *et al.*, 2021) used DA an inverse proxy for audit quality (AQ). Auditor tenure is negatively related to AQ (Jadiyappa *et al.*, 2021), whereas (Mohapatra *et al.*, 2021) found that auditor rotation does not impact AQ. Including auditor tenure and rotation, we found auditor rotation is statistically significant in relation to EQ, proving the study's contribution in the Indian context.

The results of the study have many folds; explaining the relationship between AQ and EQ with a sample of 376 non-financial Indian firms, we used five different types of proxies to capture a comprehensive AQ framework like auditor size (A_SIZE), audit fee (A_FEE), JA, auditor tenure (A_TENURE) and auditor rotation (A_ROTATION). We found that all audit attributes show the direction of the effect, consistent with previous studies. JA, A_TENURE and A_ROTATION have a statistically significant impact on EQ.

2. Review of literature and hypotheses development

2.1 Underlying theories

Agency theory suggests opportunistic behavior, which means that individuals aim to raise their likely interests, and thus, managers and other stakeholders will have conflicts of

interest. Managers are eager to inflate reported earnings to get more compensation; on the other hand, the principals want to reduce agency costs to have more earnings for them. As a result, control techniques, i.e. external audits suggested by agency theory, eliminate these conflicts and monitor managers' activities and performance through governance (Brickley and James, 1987). The information asymmetry theory suggests that the state of information irregularity occurs when one party has more or improved information than the other in a relationship. Managers have more insider information regarding firms' performance and economic activities and may manipulate accounting information while preparing financial statements to be presented to principals (shareholders). The theory of information asymmetry encourages control mechanisms (external audit) to reduce EM activities and increase a corporate's performance. Finally, agency and information asymmetry theory emphasize a control mechanism (external audit) to reduce conflict between agents and principals and increase transparency. EM harms the quality of earnings as it misrepresents the information in a less suitable way for forecasting cash flows, indicating that EM negatively impacts EQ (Cug and Cugova, 2021).

2.2 Audit quality and earnings management

The external audit is a significant indicator of the reliability of the company's financial statements (Alzoubi, 2016; Jadiyappa *et al.*, 2021). The absence of independence of the auditor will root for unreliable and doubtful financial reporting. Existing literature confirms the association between AQ attributes and EM practices, which motivated the present study to enlighten the Indian context further.

2.2.1 Auditor size and EM. In the majority of research related to AQ, auditor size (A_SIZE) has been taken as a proxy for AQ (Abu Afifa *et al.*, 2021; Alzoubi, 2016; DeAngelo, 1981; Houqe *et al.*, 2017). Most researchers have studied AQ with auditor size by distinguishing between Big-4 [1] and non-Big-4 audit firms. Big-4 auditors would be more inspired to depict managerial dishonesty as they may be able to exercise much more active oversight over companies. They would incur a massive loss if an audit disaster occurred (DeAngelo, 1981). Additionally, because Big-4 has more clientele to care for, Big-4 auditors have strong motivations to develop and preserve a high-quality audit process, increasing the possibility of dedicating energetic resources to auditing to guard their clients' market reputation. As a result, they will be more effective in reducing EM practices to protect their reputations by avoiding legal risk (Alzoubi, 2016). Some past studies gave the opposite opinion, argued that Big-4 audit firms charge more than other audit firms and found a positive association between audit fees and EM. The same argument was also supported by (Alali, 2011; Li and Lin, 2005). Other studies (Maijoor and Vanstraelen, 2006; Sun *et al.*, 2011) found no significant impact of Big-4 audit firms on EM practices. Hence, the first hypothesis of this study is as follows.

H1. Auditor size (A_SIZE) negatively affects EM practices and improves EQ

2.2.2 Joint auditor and EM. Joint audits may enhance AQ and strengthen the reliability of financial statements. By choosing two different audit firms, the client firm avoids the potential drawback of auditor rotation and discontinuity of competence while still allowing audit firms to rotate, protecting auditor independence and maintaining the remaining auditor's knowledge and understanding of the client's business operations (Barghathi *et al.*, 2020; Carcello and Nagy, 2004). Further, the risk of independence in auditing due to monetary connection is possibly a less critical matter with the joint audit than the single auditor approach since lesser fees are at stake for each auditor. Accordingly, the two audit firms may take a robust stand in contradiction of pressure from the managers or/and controlling groups and report their opinions on the clients' accounts more independently (Garcia-Blandon *et al.*,

2021; Ratzinger-Sakel *et al.*, 2013). With these discussions, the following hypothesis is framed.

H2. A joint auditor (JAUDIT) negatively affects EM practices and improves EQ.

2.2.3 Audit fee and EM. Past studies found a significantly negative impact of audit fees on EM (Alzoubi, 2016). Some researchers revealed the positive linkages between audit fees and EM (Alali, 2011). The following hypothesis is framed for audit fees.

H3. Audit fees (A_FEE) negatively affect EM practices and improves EQ.

2.2.4 Audit tenure and EM. Many nations, including the USA's Sarbanes-Oxley Act of 2002 (SOX) and India's Companies Act. 2013, have suggested or adopted regulations requiring the rotation of external auditors. Prominent business failures, like Satyam Computer in India and Enron Corporation in the USA, frequently impacted the development of these regulations. Therefore, the motivation behind introducing these rules restricting audit tenure is the assumption that a long relationship with a firm will tend to impair an auditor's impartiality (Ghosh and Moon, 2005; Jadiyappa *et al.*, 2021).

Conversely, the literature gave two reasons why audit tenure may be positively linked to AQ. First, an auditor has a long relationship with a particular company; the more information the auditor acquires about the client firm's operations, leading to expertise that is beneficial for auditing financial statements. Second, this developed expertise motivates auditors to shape and protect their reputations as experts in the area to attract upcoming clients (DeAngelo, 1981). Past studies find a positive association between auditor tenure and AQ that reduces EM and improves EQ (Ghosh and Moon, 2005; Gul *et al.*, 2009).

In India, as per section 139 (2) of the Companies Act, 2013 in the case of a listed company, an individual as auditor shall have a term not more than five consecutive years, and an audit firm as auditor shall have a term not more than two terms of five consecutive years (Saxena, 2014). In light of the above discussion, the following hypothesis is formed.

H4. Audit tenure (A_TENURE) negatively affects EM practices and improves EQ.

2.2.5 Auditor rotation and EM. As discussed in section 2.2.4, auditor tenure reduces EM practices, so auditors' rotation may allow managers to indulge in more EM practices in the year the auditor is changed. Hence, the process of an auditor rotation may decline EQ by increasing EM. The following hypothesis is framed for auditor rotation.

H5. Auditor rotation (A_ROTATION) positively affects EM practices and reduces EQ.

All five hypotheses are summarized in Figure 1 (available online at: https://drive.google.com/file/d/1EhD7VxaqrhM_t9lL5XVeTZUpauDjT0gk/view?usp=drive_link) to provide an overall study picture.

3. Research methodology

3.1 The sample, data collection and study period

The present study is related to Indian firms listed on the Bombay Stock Exchange (BSE). An initial sample consisted of 408 non-financial firms from 39 industries, but the non-availability of data restricted the number to 376 firms for empirical analysis. The present study uses the period from 2001 to 2020 because it gives an overall image and long-term development of the Indian economy. During the COVID-19 pandemic, there was an unexpected change in every business environment and government policy, which may lead to biased results in the present study. The present study chose a period before the COVID-19 break in India and restricted it till 2020. The data source is CMIE–ProwessIQ, an authenticated database for Indian firms.

3.2 Measurement of variables

3.2.1 Measurement of earnings management (EM): (dependent variable). Numerous analyses of EM, including the valuation of changes in accounting policy, specific accounting transactions and accruals (Dechow and Dichev, 2002; McNichols, 2002) have been used in the literature, but DA were used significantly as a proxy for EM measurement (Alzoubi, 2016).

According to (Jones, 1991), "abnormal accruals" or "DA" in total accruals are indicators of EM, which can be quantified as [$DA_{it} = TACC_{it} - NDA_{it}$]. With the argument that estimation errors (Dechow and Dichev, 2002), introduced a new indicator for the quality of working capital accruals by linking mapping importance of accruals in cash flow realization. McNichols (2002) further improved the (Dechow and Dichev, 2002) model and studied the mapping ability of cash flows for accruals after controlling for the accruals due to changes in credit sales and depreciation accruals on PPE. In the present study, we have used the McNichols model (2002) as suggested in past studies (Duarte *et al.*, 2022).

Total Accruals (TACC) are calculated using the cash flow approach (Hribar and Collins, 2002). For estimating non-discretionary accruals (NDA), we used (McNichols, 2002) model (equation 1) cross-sectionally for each industry, which gives better estimates than the time-series model for identifying EM (Alzoubi, 2016).

$$\frac{TACC_{i,j,t}}{Assets_{i,j,t-1}} = \beta_{0,j} + \beta_{1,j}\frac{CFO_{i,j,t-1}}{Assets_{i,j,t-1}} + \beta_{2,j}\frac{CFO_{i,j,t}}{Assets_{i,j,t-1}} + \beta_{3,j}\frac{CFO_{i,j,t+1}}{Assets_{i,j,t-1}} + \beta_{4,j}\frac{\Delta REV_{i,j,t}}{Assets_{i,j,t-1}} + \beta_{5,j}\frac{PPE_{i,j,t}}{Assets_{i,j,t-1}} + \varepsilon_{i,j,t} \quad (1)$$

Where for each *i (firm), j (industry) and t (year)*: TACC represents total accruals; CFO represents cash from operation; ΔREC represents operating revenue, and PPE represents depreciation accruals. All variables are divided by total assets ($Assets_{i,j,t-1}$) at the beginning of the year to control heteroscedasticity. We found the magnitude of discretionary accruals ($DA_{i,j,t}$) as a remaining part of $TACC_{i,j,t}$ after deducting $NDA_{i,j,t}$. In the consistency of previous studies, the absolute value of DA would be a measure of the level of EM (Alzoubi, 2016; Houqe *et al.*, 2017; Jadiyappa *et al.*, 2021) since it keeps a consistent description and is free from any direction as EM may go in any direction (Ma and Ma, 2017).

3.2.2 Measurement of auditor size (A_SIZE): (independent variable). In the auditing literature, auditor size (Abu Afifa *et al.*, 2021; Alzoubi, 2016; Houqe *et al.*, 2017) is taken as an indicator of AQ. We used a binary variable assigning "1" if Big-4 firm audits a sample firm in a particular year; otherwise, "0".

3.2.3 Measurement of joint auditor (JA): (independent variable). We have created a binary variable having a value of "1" if more than one auditor audits the firm for a specific year; otherwise, "0" (André *et al.*, 2016; Garcia-Blandon *et al.*, 2021; Ratzinger-Sakel *et al.*, 2013).

3.2.4 Measurement of audit fee (A_FEE): (independent variable). The engagement of an independent auditor has empirical and theoretical support to cut agency cost strategy. Audit fees, i.e. the auditor charges, show auditor independence (Alali, 2011; Gul *et al.*, 2003). Auditor fee divided by total assets is a proxy for audit independence.

3.2.5 Measurement of auditor tenure (A_TENURE): (independent variable). The term "Auditor Tenure" describes how long a firm has been an auditor's client. As suggested by (Ghosh and Moon, 2005; Lim and Tan, 2009), the variable is created by calculating the cumulative number of years that a specific audit firm has continuously examined the financial statements of a particular client over time in our sample period.

3.2.6 Measurement of auditor rotation (A_ROTATION): (independent variable). This variable is a binary variable signifying a particular year in which a new auditor is appointed,

i.e. the existing auditor is rotated or changed. "1" is assigned for a particular year in which a new auditor is selected for a specific firm; otherwise, "0".

3.2.7 Control variables. The corporate and its financial environment are affected by numerous factors. To control such impact, various corporate attributes, as suggested in the literature, including liquidity; firm size; firm age; leverage; return; growth; applicability of Ind-AS have been covered in the present research, as shown in Table 1 (available online at: https://drive.google.com/file/d/1v_o1cO42cPM-3amDRmH8_lHsY1kpD1U9/view?usp=share_link).

4. Data analysis and findings

4.1 Descriptive analysis

Descriptive statistics (Table 2 (available online at: https://drive.google.com/file/d/18nxMeGdlPNztkTQH-cFlHF94IYkjqY6_/view?usp=share_link)) gives an idea regarding the overall composition of different variables used in the study. The number of observations is unequal due to missing data for some firm years in the data set.

4.2 Pairwise correlations, VIF and tolerance

Further pairwise correlation is calculated with a significance level VIF and Tolerance are also reported (Table 3 (available online at: https://drive.google.com/file/d/1ZTkNwWFsCEgERYeNp9vFPOtBYREXSmF8/view?usp=share_link)). If the variance inflation factor (VIF) value for a variable is more than "10", then it is a severe concern indicating a multicollinearity problem (Damodar Gujarati, 2008). VIF is less than 10 for all variables.

4.3 Models specification and regression analysis

The impact of AQ on EQ with control variables has been analyzed using equations (2) and (3).

Empirical Model: 1

$$DA_{it} = \beta_1 + \beta_2\ JA_{it} + \beta_3\ A\_FEE_{it} + \beta_4\ A\_SIZE_{it} + \beta_5\ A\_TENURE_{it} + \beta_6\ WCAP_{it} + \beta_7\ NPR_{it} + \beta_8\ DEBT_{it} + \beta_9\ PBRATIO_{it} + \beta_{10}\ FSSIZE_{it} + \beta_{11}\ FAGE_{it} + \beta_{12}\ ROA_{it} + \beta_{13}\ INDAS_{it} + \varepsilon_{it} \quad (2)$$

As discussed in section 2.2.4, extended auditor tenure reduces EM practices, as supported by (Ghosh and Moon, 2005; Gul *et al.*, 2009; Manry *et al.*, 2008), motivated us to introduce a new variable auditor rotation (A_ROTATION) in the model in place of auditor tenure (A_TENURE). In empirical model: 2 (equation 3), we believe the new auditor needs time to understand the accounting practices and management's actions, giving more space for managers that could be involved in EM practices. So the coefficient of A_ROTATION ideally should show a positive impact on DA.

Empirical Model: 2

$$DA_{it} = \beta_1 + \beta_2\ JA_{it} + \beta_3\ A\_FEE_{it} + \beta_4\ A\_SIZE_{it} + \beta_5\ A\_ROTATION_{it} + \beta_6\ WCAP_{it} + \beta_7\ NPR_{it} + \beta_8\ DEBT_{it} + \beta_9\ PBRATIO_{it} + \beta_{10}\ FSSIZE_{it} + \beta_{11}\ FAGE_{it} + \beta_{12}\ ROA_{it} + \beta_{13}\ INDAS_{it} + \varepsilon_{it} \quad (3)$$

Apart from the pooled OLS, we also used the panel fixed effect (FE) estimator, suggested by the Hausman test, as shown in Table 4 (available online at: https://drive.google.com/file/d/1KERhgQ9nX_f3kJpzpBnwgu8oqVra7ZhZ/view?usp=share_link).

The FE model also removes the effect of that time-invariant unobserved heterogeneity of the factors (which are not in our model explicitly), which impact the dependent variable. After

estimating equations (2 and 3) using the FEs estimator, we checked groupwise heteroscedasticity using the modified Wald test (H0: sigma(i)^2 = sigma^2 for all i) (*P*-value = 0.0000 for each model). Statistics rejected H0, confirming groupwise heteroscedasticity in the data. In literature, in this situation, it is strongly advised to calculate robust standard errors (SE), which will not change the values of β coefficients but will address the problem of groupwise heteroscedasticity by adjusting estimates' values of SE (Wooldridge, 2015). Hence, we have used robust SE for OLS and FE estimators. Regression (with robust SE) results for empirical models are given in Table 5 (available online at: https://drive.google.com/file/d/1TCQXfHA4sle3EH4p6ifzheKB9NMnSWJX/view?usp=share_link).

4.3.1 Robustness checks. To check the robustness of the empirical models, we have used different control variables, for liquidity: CASH; for profitability: NOPR; for firm size: FA_SIZE have been used. Table 6 (available online at: https://drive.google.com/file/d/1rRyIrKUfTzkCBrpMWTWG0bIrqpjoUxeU/view?usp=share_link) shows the results with changed variables that are consistent with the previous result shown in Table 5.

4.3.2 Endogeneity. Tables 5 and 6 reveal the results of the fixed-effects FE estimator, which is assumed to take care of the endogeneity problem due to time-invariant unobserved unit-specific heterogeneity (Alzoubi, 2016). The present paper also uses the instrumental variable (OLS-2SLS and Panel-IV) approach for the endogeneity issue with regressors (Alzoubi, 2016; Cameron and Trivedi, 2010; Gaio and Raposo, 2011). Independent variables and lag values (Alzoubi, 2016; Wooldridge, 2015) of control variables are used as instruments for A_FEE, which is supposed to be endogenous. After running 2SLS regression, we performed a post-estimation test for endogeneity (Durbin (score) *p*-value (0.2442); Wu-Hausman *p*-value (0.2447)) failed to reject the H0: Variables are exogenous, indicating that A_FEE is not an endogenous variable. Regression results are shown in Table 7 (available online at https://drive.google.com/file/d/1Ob65tVFVh0UtO4rU8RZrHd9ZZp_Js0EC/view?usp=share_link).

Then we performed a test for overidentifying restrictions, test statistics $\chi^2(7) = 12.7111$, *p*-values 0.0795, which is more than 0.05. We could not reject the H0 and concluded that the model held valid overidentifying restrictions. We also applied panel IV regression with OLS-2SLS regression; results shown in table 7 are primarily in line with tables 5 and 6 in direction and significance, except for A_FEE, which gives a different sign supporting past studies conducted by (Alali, 2011; Antle *et al.*, 2006; Gul *et al.*, 2003).

5. Conclusion, contribution/implication and limitations

5.1 Conclusion

The present study showed evidence of a significant negative relationship between AQ and EM through DA, which is an inverse proxy for EQ. It proposed that a JA, as recommended by ICAI (Srivats, 2022), increases reported EQ with a reduction in EM practices. More than one auditor together may take a robust reporting stand against EM practices in a client firm (Ratzinger-Sakel *et al.*, 2013).

Further, auditor size (A_SIZE) and EM is negative, although this variable is not found to be significant in any model in the present study. However, its direction is the same throughout the investigation, which supports some past studies (Maijoor and Vanstraelen, 2006; Sun *et al.*, 2011). Audit fee (A_FEE) shows audit independence (Alzoubi, 2016) negatively impacts DA, ensuring a high EQ; its relationship is statistically significant in OLS and FE estimators but not substantial in 2SLS and IV regression. It suggested that cutting audit fees have a high chance of diluting reported EQ. Audit tenure (A_TENURE) is negatively associated with EM in the whole study and is statistically significant in OLS, 2SLS and IV regressions. It indicates that a long association between the client and auditor may increase EQ as suggested in literature (Ghosh and Moon, 2005; Gul *et al.*, 2009; Manry *et al.*, 2008).

The negative relationship between A_TENURE and DA motivated us to make a new model (model-2; equation 3), replacing A_TENURE with A_ROTATION to investigate the impact of AQ on EQ in the year in which the auditor is changed for a particular firm. Results show that the coefficient of A_ROTATION is positive and statistically significant in OLS, FE, 2SLS and IV regressions. This might be because the new auditor may have difficulty understanding the client's accounting practices followed by management to manage earnings.

5.2 Contribution/implications

The present study gives a progressive and significant intuition regarding AQ and its impact on reported EQ to the policymakers to revisit the applicability of a JA, which is optional at present to make it mandatory for a specific class of Indian firms. Another contribution of the study is to suggest that corporates continue with the same auditor as long as possible under the Companies Act 2013 to improve EQ as other stakeholders desire. One of the critical pieces of advice for investors and other stakeholders is to take caution in the year the auditor is rotated while using reported earnings.

5.3 Limitations

The present study uses a sample of non-financial Indian firms, which restricts its implication on financial firms; at the same time, it also gives an idea for financial sector also. Big-4 audit firms are taken as a proxy for auditor size, which may be one of the limitations that motivate to explore other proxies for it, like the number of audit engagements, industry experts, audit fee collected, the number of partners in an audit firm, etc. While calculating audit tenure, we have ignored the relationship before 2001 of a particular auditor with a specific client.

Note

1. Big-4 audit firms include Deloitte Touche Tohmatsu India Private Limited, PwC India, KPMG India Private Limited and Ernst & Young India with its member firms.

References

Abu Afifa, M.M., Saleh, I.H. and Haniah, F.F. (2021), "Does earnings management mediate the relationship between audit quality and company performance? Evidence from Jordan [Article]", *Journal of Financial Reporting and Accounting*, Vol. 21 No. 3, pp. 747-774, doi: 10.1108/JFRA-08-2021-0245.

Al-Hiyari, A., Kolsi, M.C. and Muqattash, R. (2022), "Big N auditors and the quality of earnings: evidence from middle eastern and north african countries", *Journal of General Management*, Vol. 47 No. 4, pp. 195-212.

Alali, F. (2011), "Audit fees and discretionary accruals: compensation structure effect", *Managerial Auditing Journal*, Vol. 26 No. 2, pp. 90-113, doi: 10.1108/02686901111094994.

Alzoubi, E.S.S. (2016), "Audit quality and earnings management: evidence from Jordan [Article]", *Journal of Applied Accounting Research*, Vol. 17 No. 2, pp. 170-189, doi: 10.1108/JAAR-09-2014-0089.

André, P., Broye, G., Pong, C. and Schatt, A. (2016), "Are joint audits associated with higher audit fees? [Article]", *European Accounting Review*, Vol. 25 No. 2, pp. 245-274, doi: 10.1080/09638180.2014.998016.

Antle, R., Gordon, E., Narayanamoorthy, G. and Zhou, L. (2006), "The joint determination of audit fees, non-audit fees, and abnormal accruals", *Review of Quantitative Finance and Accounting*, Vol. 27 No. 3, pp. 235-266.

Awuye, I.S. (2022), "The impact of audit quality on earnings management: evidence from France", *Journal of Accounting and Taxation*, Vol. 14, pp. 52-63.

Barghathi, Y., Ndiweni, E. and Lasyoud, A.A. (2020), "Joint audit, audit market concentration, and audit quality: perceptions of stakeholders in the UAE", *Corporate Ownership and Control*, Vol. 17, p. 32.

Brickley, J.A. and James, C.M. (1987), "The takeover market, corporate board composition, and ownership structure: the case of banking", *The Journal of Law and Economics*, Vol. 30 No. 1, pp. 161-180, doi: 10.1086/467134.

Cameron, A.C. and Trivedi, P.K. (2010), *Microeconometrics Using Stata*, Vol. 2, Stata Press College Station, TX.

Carcello, J.V. and Nagy, A.L. (2004), "Audit firm tenure and fraudulent financial reporting", *AUDITING: A Journal of Practice & Theory*, Vol. 23 No. 2, pp. 55-69, doi: 10.2308/aud.2004.23.2.55.

Cug, J. and Cugova, A. (2021), "Relationship between earnings management and earnings quality in the globalized business environment", *SHS Web of Conferences*, Vol. 92, 02011, doi: 10.1051/shsconf/20219202011.

Damodar Gujarati, D.P. (2008), *Basic Econometrics*, 5th ed., McGraw-Hill Education, Boston.

DeAngelo, L.E. (1981), "Auditor size and audit quality", *Journal of Accounting and Economics*, Vol. 3 No. 3, pp. 183-199, doi: 10.1016/0165-4101(81)90002-1.

Dechow, P.M. and Dichev, I.D. (2002), "The quality of accruals and earnings: the role of accrual estimation errors [Conference Paper]", *Accounting Review*, Vol. 77 Suppl, pp. 35-59, doi: 10.2308/accr.2002.77.s-1.35.

Duarte, A.F., Lisboa, I. and Carreira, P. (2022), "Does earnings quality impact firms' performance? The case of Portuguese SMEs from the mold sector [Article]", *Journal of Financial Reporting and Accounting*. doi: 10.1108/JFRA-12-2021-0444.

Gaio, C. and Raposo, C. (2011), "Earnings quality and firm valuation: international evidence* [Article]", *Accounting and Finance*, Vol. 51 No. 2, pp. 467-499, doi: 10.1111/j.1467-629X.2010.00362.x.

Garcia-Blandon, J., Castillo-Merino, D., Argilés-Bosch, J.M. and Ravenda, D. (2021), "Mandatory joint audit and audit quality in the context of the european blue chips [Article]", *Journal of Business Economics and Management*, Vol. 22 No. 5, pp. 1378-1395, doi: 10.3846/jbem.2021.14959.

Ghosh, A. and Moon, D. (2005), "Auditor tenure and perceptions of audit quality", *The Accounting Review*, Vol. 80 No. 2, pp. 585-612, doi: 10.2308/accr.2005.80.2.585.

Gul, F.A., Chen, C.J.P. and Tsui, J.S.L. (2003), "Discretionary accounting accruals, managers' incentives, and audit fees*", *Contemporary Accounting Research*, Vol. 20 No. 3, pp. 441-464, doi: 10.1506/686E-NF2J-73X6-G540.

Gul, F.A., Fung, S.Y.K. and Jaggi, B. (2009), "Earnings quality: some evidence on the role of auditor tenure and auditors' industry expertise", *Journal of Accounting and Economics*, Vol. 47 No. 3, pp. 265-287, doi: 10.1016/j.jacceco.2009.03.001.

Houqe, M.N., Ahmed, K. and van Zijl, T. (2017), "Audit quality, earnings management, and cost of equity capital: evidence from India [article]", *International Journal of Auditing*, Vol. 21 No. 2, pp. 177-189, doi: 10.1111/ijau.12087.

Hribar, P. and Collins, D.W. (2002), "Errors in estimating accruals: implications for empirical research", *Journal of Accounting Research*, Vol. 40 No. 1, pp. 105-134, doi: 10.1111/1475-679X.00041.

Jadiyappa, N., Hickman, L.E., Kakani, R.K. and Abidi, Q. (2021), "Auditor tenure and audit quality: an investigation of moderating factors prior to the commencement of mandatory rotations in India [Article]", *Managerial Auditing Journal*, Vol. 36 No. 5, pp. 724-743, doi: 10.1108/MAJ-12-2020-2957.

Jones, J. (1991), "Earnings management during import relief investigations", *Journal of Accounting Research*, Vol. 29 Autumn, pp. 193-228.

Li, J. and Lin, J.W. (2005), "The relation between earnings management and audit quality", *Journal of Accounting and Finance Research*, Vol. 13 No. 1, pp. 1-11.

Lim, C.Y. and Tan, H.-T. (2009), "Does auditor tenure improve audit quality? Moderating effects of industry specialization and fee dependence", Moderating Effects of Industry Specialization and Fee Dependence (September 11, 2009). Singapore Management University School of Accountancy Research Paper(2014-07).

Ma, S. and Ma, L. (2017), "The association of earnings quality with corporate performance", *Pacific Accounting Review*, Vol. 29 No. 3, pp. 397-422.

Maijoor, S.J. and Vanstraelen, A. (2006), "Earnings management within Europe: the effects of member state audit environment, audit firm quality and international capital markets", *Accounting and Business Research*, Vol. 36 No. 1, pp. 33-52, doi: 10.1080/00014788.2006.9730005.

Manry, D.L., Mock, T.J. and Turner, J.L. (2008), "Does increased audit partner tenure reduce audit quality?", *Journal of Accounting, Auditing & Finance*, Vol. 23 No. 4, pp. 553-572.

McNichols, M.F. (2002), "Discussion of the quality of accruals and earnings: the role of accrual estimation errors [Conference Paper]", *Accounting Review*, Vol. 77 Suppl, pp. 61-69, doi: 10.2308/accr.2002.77.s-1.61.

Mohapatra, P., Dayanandan, A., Kuntluru, S. and A, A. (2021), "Audit partner rotation, and its impact on audit quality: evidence from India", *Cogent Economics & Finance*, Vol. 9 No. 1, 1938379, doi: 10.1080/23322039.2021.1938379.

Nurunnabi, M., Donker, H. and Jermakowicz, E. (2020), "Joint audits and mutual ties of audit firm networks", *Business Horizons*, Vol. 63 No. 4, pp. 435-449.

Ratzinger-Sakel, N.V.S., Audousset-Coulier, S., Kettunen, J. and Lesage, C. (2013), "Joint audit: issues and challenges for researchers and policy-makers [article]", *Accounting in Europe*, Vol. 10 No. 2, pp. 175-199, doi: 10.1080/17449480.2013.834725.

Saxena, C.A. (2014), "Rotation of auditors under the Companies Act, 2013", The Chartered Accountant, Vol. 62 No. 12, pp. 103-106, available at: https://resource.cdn.icai.org/33616cajournal-june2014-25.pdf.

Srivats, K.R. (2022), May, 24-2022, "ICAI bats for introduction of joint audits in line with Company Law Committee recommendation", *The Hindu*, Vol. 71 No. 1, p. 114, available at: https://www.thehindubusinessline.com/companies/ca-institute-bats-for-introduction-of-joint-audits-in-line-with-company-law-committee-recommendation/article65457421.ece

Sun, J., Liu, G. and Lan, G. (2011), "Does female directorship on independent audit committees constrain earnings management?", *Journal of Business Ethics*, Vol. 99 No. 3, pp. 369-382.

Wooldridge, J.M. (2015), *Introductory Econometrics: A Modern Approach*, Cengage Learning.

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